

Fig. 1: Verification of differential expression of HIF3alpha splice variant 1 by quantitative RT-PCR

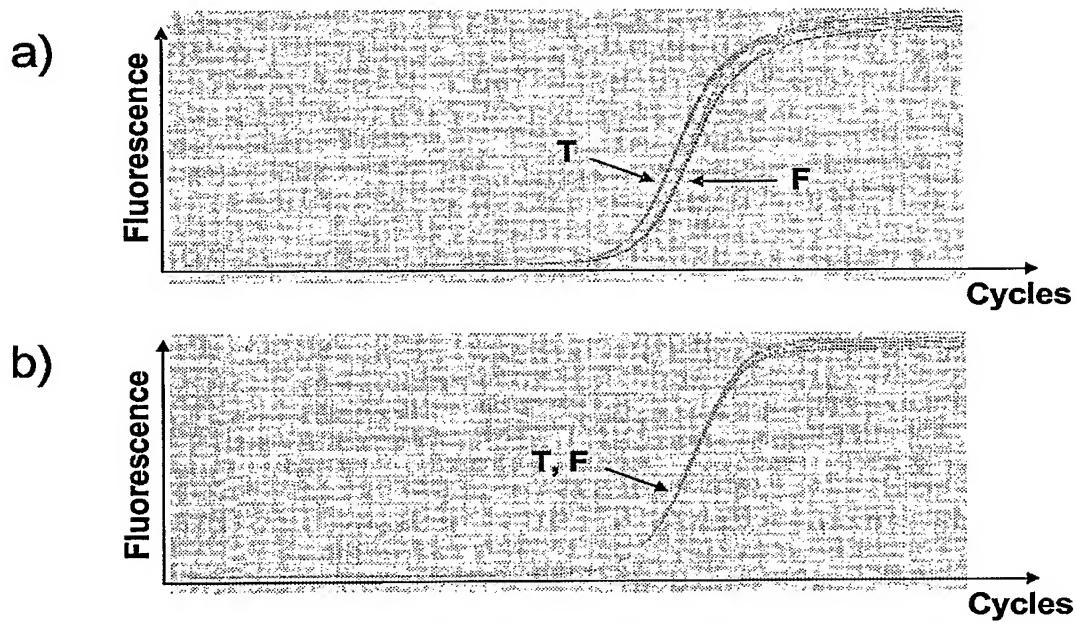
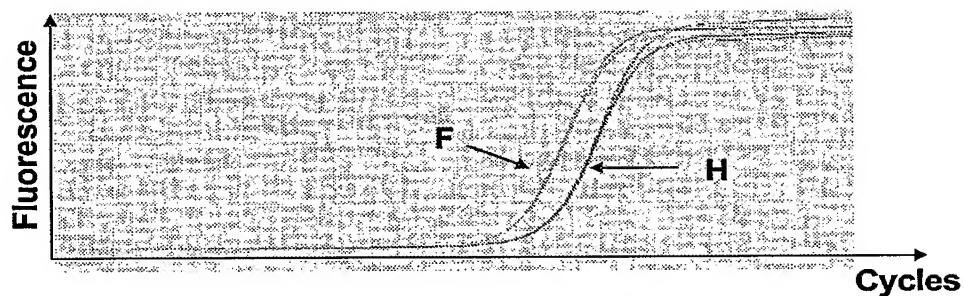


Fig. 2: Verification of differential expression of HIF3alpha splice variant 1 by quantitative RT-PCR

a)



b)

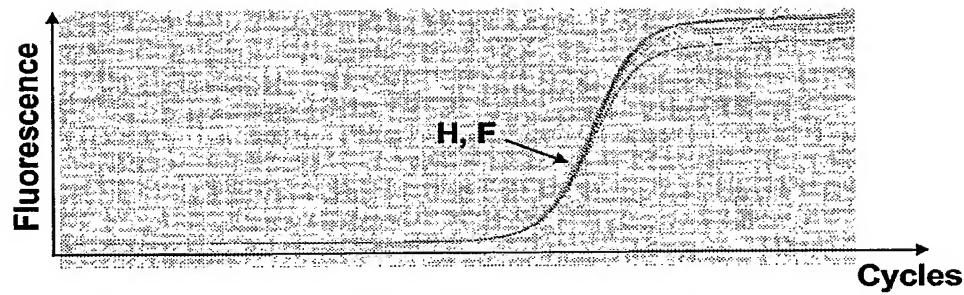
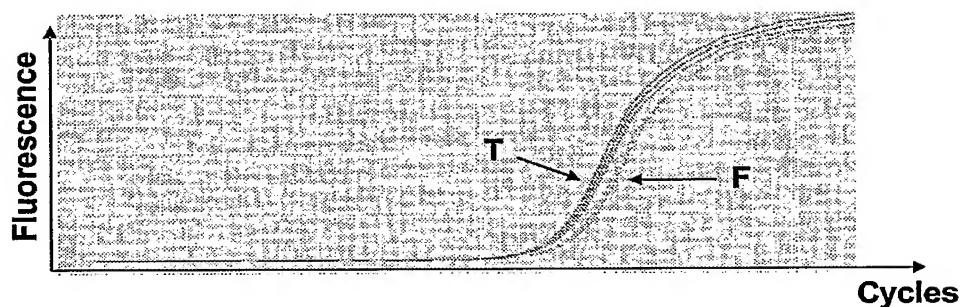


Fig. 3: Verification of differential expression of HIF3alpha splice variant 2 by quantitative RT-PCR

a)



b)

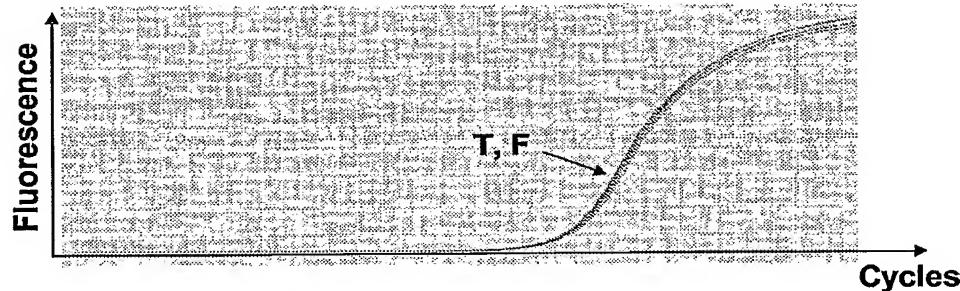


Fig. 4: Verification of differential expression of HIF3alpha splice variant 3 by quantitative RT-PCR

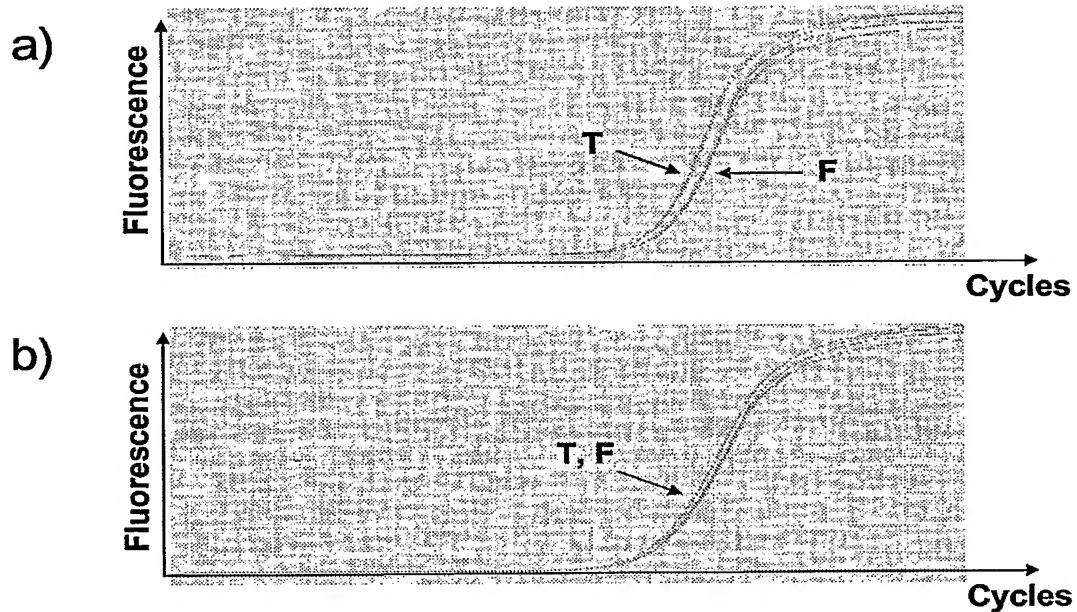


Fig. 5: Verification of differential expression of HIF3alpha splice variant 5 by quantitative RT-PCR

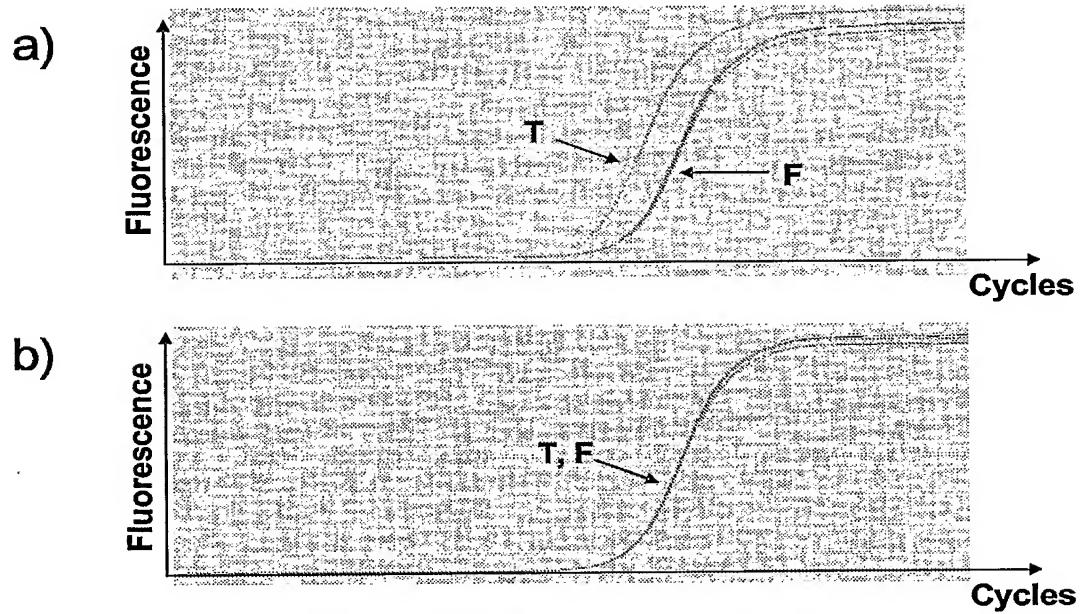


Fig. 6: SEQ ID NO. 1**Length: 289 bp**

```
1 CATTATGAG AGTTTATTCA TTCAAAACAT ATTTACTGTC GGGCGTGGTG
51 GTTCATACCA GTAATCCCAG CACTTGGGA GGCCAAGGCA GGTGGATCGC
101 TTGAACTCAG GAGTTCAAGA CCAGCCTGGG CAACATGGTG GAACTTCGTC
151 TCTACAAAAC ATATAAACAT CAGCCAGGCA TGATGGCACA TAGCTGCAGT
201 CCCAGCTACT TGTGGGAGCT GAAGTAGGAG GATCACTTGA GCCCAGGAGG
251 TCGAGGCTGT GGTGAGCTGT GTTTGTGCCA CTGCACTCC
```

Fig. 7: Alignment of SEQ ID NO. 1 with human HIF3alpha splice variant sv1 cDNA, SEQ ID NO. 6

289 GGAGTGCAGTGGCACAAACACAGCTCACCAAGCCTCGACCTCCTGGGCT 240
||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1421 GGAGTGCAGTGGCACAAACACAGCTCACCGCAGCCTCGACCTCCTGGGCT 1470

239 CAAGTGATCCTCCTACTTCAGCTCCCACAAGTAGCTGGGACTGCAGCTAT 190
||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1471 CAAGTGATCCTCCTACTTCAGCTCCCACAAGTAGCTGGGACTGCAGCTAT 1520

189 GTGCCATCATGCCTGGCTGATGTTATATGTTTGAGAGACGAAGTTCC 140
||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1521 GTGCCATCATGCCTGGCTGATGTTATATGTTTGAGAGACGAGGTTTC 1570

139 ACCATGTTGCCAGGCTGGTCTTGAACCTCCTGAGTTCAAGCGATCCACCT 90
||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1571 ACCATGTTGCCAGGCTGGTCTTGAACCTCCTGAGTTCAAGCGATCCACCT 1620

89 GCCTTGGCTCCAAAGTGTGGGATTACTGGTATGAACCACCACGCCCG 40
||||| ||||| ||||| ||||| ||||| ||||| |||||
1621 GCCTTGGCTCCAAAGTGTGGGATTACTGGTATGAACCACCACGCCCG 1670

39 ACAGTAAATATGTTGAATGAATAACTCTCATAAATG 1
||||| ||||| ||||| ||||| |||||
1671 ACAGTAAATATGTTGAATGAATAACTCTCATAAATG 1709

**Figure 8: SEQ ID NO. 2:
amino acid sequence of
human HIF3alpha,
splice variant 1**

Length: 450 aa

```
1 MRPAAGAARR PRCCTS WLTR CSPAASAPT WTRPLSCASP SATCACTASA
51 PQLELIGHSI FDFIHPCDQE ELQDALTPQQ TLSRRKVEAP TERCFSLRMK
101 STLTSGRRTL NLKAATWKVL NCSGHMRAYK PPAQTSPAGS PDSEPLQCL
151 VLICEAIPHP GSLEPPLGRG AFLSRHSILDM KFTYCDDRIA EVAGYSPDDL
201 IIGCSAYEYIH ALDSDAVSKS IHTLLSKGQA VTGQYRFLAR SGGYLWTQTO
251 ATVVSGGRGP QSESIVCVHF LISQVEETGV VLSLEQTEQH SRRPIQRGAP
301 SQKDTPNPGD SLDTPGPRIL AFLHPPSLSE AALAAADPRRF CSPDLRLLG
351 PILDGASVAA TPSTPLATRH PQSPLSADLP DELPVGTENV HRLFTSGKDT
401 EAVETDLDIA QDPSTPLNL NEPLGFHFVT QSGVQWHKHS SPQPRPPGLK
```

**Fig. 9: SEQ ID NO. 3:
amino acid sequence of
human HIF3alpha,
splice variant 2**

Length: 342 aa

```
1  MALGLQRARS TTELRKKEKSR DAARSRRSQE TEVLYQLAHT LPFARGVSAH
 51 LDKASIMRLT ISYLRMHRLC AAGEWNQVGA GGEPLDACYL KALEGFVMVL
101 TAEGDMAYLS ENVSKHLGLS QLELIGHSIF DFIHPCDQEE LQDALTPQQT
151 LSRRKVEAPT ERCFSLRMKS TLTSRGRTILN LKAATWKVLN CSGHMRAYKP
201 PAQTSPPAGSP DSEPPLQCLV LICEAIPHGP SLEPPLGRGA FLSRHSLDMK
251 FTYCDDRIAE VAGYSPDDLI GCSAYEYIHA LDSDAVSKSI HTLLSKGQAV
301 TGQYRFLARS GGYLWTQTQA TVVSGGRGPQ SESIVCVHFL IR
```

**Fig. 10: SEQ ID NO. 4:
amino acid sequence of
human HIF3alpha,
splice variant 3**

Length: 632 aa

```
1  MALGLQRARS TTTELRKESR DAARSRRSQE TEVLYQLAHT LPFARGVSAH
51  LDKASIMRLT ISYLRMHRRLC AAGEWNQVGA GGEPLDACYL KALEGFVMVL
101 TAEGDMAYL S ENVSKHLGLS QLELIGHHSIF DFIHPCDQEE LQDALTPQQT
151 LSRRKVEAPT E RCFSLRMKS TLTSRGRTLN LKAATWKVLN CSGHMRAYKP
201 PAQTSPAGSP D SEPPPLQCLV LICEAIPH PG SLEPPPLGRGA FLSRHSLDMK
251 FTYCDDRIA E VAGYSPDDLI GCSAYEYIHA LDSDAVSKSI HTLLSKGQAV
301 TGQYRFLARS GGYLWTQTQA TVVSGGRGPQ SESIVCVHFL ISQVEETGVV
351 LSLEQTEQHS R RPIQRGAPS QKDTPNPGDS LDTPGPRILA FLHPPSLSEA
401 ALAADP RRF C SPDLRRLLGP IILDGASVAAT PSTPLATRHP QSPLSADLPD
451 ELPVGTENVH RLFTSGKDTE AVETDLDIAQ DADALDLEML APYISMDDDF
501 QLNASEQLPR AYHRPLGAVP RPRARSFHGL SPPALEPSLL PRWGSDPRLS
551 CSSPSRGDPS ASSPMAGARK RTLQAQSSEDE DEGVELLGVR PPKRSPSPEH
601 ENFLLFPLSL VCWGINGILW PSLPSWLKPT VL
```

Fig. 11: SEQ ID NO. 5:
amino acid sequence of
human HIF3alpha,
splice variant 5

Length: 648 aa

```
1 MRLTISYLRM HRLCAAGEWN QVGAGGEPLD ACYLKALEGF VMVLTAEGDM
51 AYLSENVSKH LGLSQLELIG HSIFDFIHPC DQEELQDALT PQQTILSRRKV
101 EAPTERCFSL RMKSTLTSRG RTLNLKAAATW KVLNCSGHMR AYKPPAQTS
151 AGSPDSEPPPL QCLVLIICEAI PHPGSLEPPL GRGAFLSRHS LDMKFTYCDD
201 RIAEVAGYSP DDLIGCSAYE YIHALDSDAV SKSIHTLLSK GQAVTGQYRF
251 LARSGGYLWT QTQATVVSGG RGPQSESIVC VHFLISQVEE TGVVLSLEQT
301 EQHSRRPIQR GAPSQKDTPN PGDSLDTPGP RILAFLHPPS LSEAALAADP
351 RRFCSPDLRR LLGPILDGAS VAATPSTPLA TRHPQSPLSA DLPDELPVGT
401 ENVHRLFTSG KDTEAVETDL DIAQDADALD LEMLAPYISM DDDFQLNASE
451 QLPRAYHRPL GAVPRPRARS FHGLSPPALE PSLLPRWGSD PRLSCSSPSR
501 GDPSASSPMA GARKRTLAQS SEDEDEGVEL LGVRPPKRSP SPEHENFLLF
551 PLSLSFLLTG GPAPGSLQDP TELTQFLLSV LSFPILDPYP LGCAAPGLHA
601 SPFSLPTISV PQNPLHFPPQ PSRHALTTLT PHMFGAPGAP SPLGWFAI
```

**Fig. 12: SEQ ID NO. 6:
nucleotide sequence of human HIF3alpha cDNA,
splice variant 1**

Length: 1709 bp

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1 ACTCGTAACT CGCACCCGGG TCCTGGCTGC ACCGCATCCC CTCCCTGCACC
51 CCCTGGATGG CCCTTCAGCC AACGGGGGCC TGGGCGATGG TCGACCACGG
101 AGCTCGCAA GGAAAAGTCC CGGGATGCCG CCCGCAGCCG GCGCAGCCAG
151 GAGACCGAGG TGCTGTACCA GCTGGCTCAC ACGCTGCCCT TCGCCCGCGG
201 CGTCAGCGCC CACCTGGACA AGGCCTCTAT CATGCGCCTC ACCATCAGCT
251 ACCTCGGCAT GCACCGCCCTC TGCACCGCAG CTGGAGCTCA TTGGACACAG
301 CATCTTGAT TTCATCCACC CCTGTGACCA AGAGGGAGCTT CAGGACGCC
351 TGACCCCCCA GCAGACCCCTG TCCAGGAGGA AGGTGGAGGC CCCCACGGAG
401 CGGTGCTTCT CCTTGCGCAT GAAGAGTACA CTCACCAAGCC GCGGGCGCAC
451 CCTCAACCTC AAGGGCGGCCA CCTGGAAGGT GCTGAACCTC TCTGGACATA
501 TGAGGGCCTA CAAGCCACCT GCGCAGACTT CTCCAGCTGG GAGCCCTGAC
551 TCAGAGCCCC CGCTGCAGTG CCTGGTGCCTC ATCTGCGAAG CCATCCCCA
601 CCCAGGCAGC CTGGAGCCCC CACTGGGCCG AGGGGCCTTC CTCAGGCC
651 ACAGCCTGGA CATGAAGTTC ACCTACTGTG ACGACAGGAT TGCAGAAAGTG
701 GCTGGCTATA GTCCCGATGA CCTGATCGGC TGTTCCGCCT ACGAGTACAT
751 CCACGCGCTG GACTCCGATG CGGTCAAGCA GAGCATCCAC ACCTTGCTGA
801 GCAAGGGCCA GGCAGTAAACA GGGCAGTATC GCTTCCTGGC CCGGAGTGGT
851 GGCTACCTGT GGACCCAGAC CCAGGCCACA GTGGTGTCAAG GGGGACGGGG
901 CCCCCCAGTCG GAGAGTATCG TCTGTGTCCA TTATTTAAATC AGCCAGGTGG
951 AAGAGACCCG AGTGGTGCTG TCCCTGGAGCA AAACGGAGCA ACACTCTCGC
1001 AGACCCATTG AGGGGGCGC CCCCTCTCAG AAGGACACCC CTAACCCCTGG
1051 GGACAGCCTT GACACCCCTG GCCCCCGGAT CCTTGCCCTC CTGCACCCGC
1101 CTTCCCTGAG CGAGGCTGCC CTGGCCGCTG ACCCCCGCCG TTTCTGCAGC
1151 CCTGACCTCC GTGCCCTCCT GGGACCCATC CTGGATGGGG CTTCAGTAGC
1201 AGCCACTCCC AGCACCCCGC TGGCCACACG GCACCCCCAA AGTCCTCTTT
1251 CGGCTGATCT CCCAGATGAA CTACCTGTGG GCACCGAGAA TGTGCACAGA
1301 CTCTTCACCT CGGGAAAGA CACTGAGGCA GTGGAGACAG ATTTAGATAT
1351 AGCTCAGGAC CCCAGCACCC CACTCCTGAA CCTGAATGAG CCCCTGGGTT
1401 TTCACTTTGT CACCCAGTCT GGAGTGCAGT GGCACAAACA CAGCTCACCG
1451 CAGCCTCGAC CTCTGGGCT CAAGTGATCC TCCTACTTCA GCTCCCACAA
1501 GTAGCTGGGA CTGCAGCTAT GTGCCATCAT GCCTGGCTGA TGTTTATATG
1551 TTTTGTAGAG ACGAGGTTTC ACCATGTTGC CCAGGCTGGT CTTGAACCTC
1601 TGAGTTCAAG CGATCCACCT GCCTGGCCT CCCAAAGTGC TGGGATTACT
1651 GGTATGAACC ACCACGCCG ACAGTAAATA TGTTTGAAAT GAATAAACTC
1701 TCATAAAATG

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Fig. 13: SEQ ID NO. 7:
nucleotide sequence of
human HIF3alpha cDNA,
splice variant 2

Length: 2239 bp

```

1  TGGGAGCCGGC  GACTGGCGAG  CCATGGCGCT  GGGGCTGCAG  CGCGCAAGGT
51  CGACCACCGA  GCTGCGCAAG  GAAAAGTCCC  GGGATGCGGGC  CCGCAGCCGG
101  CGCAGCCAGG  AGACCGAGGT  GCTGTACCAAG  CTGGCTCACCA  CGCTGCCCTT
151  CGCCCCGCGGC  GTCAGCGCCC  ACCTGGACAA  GGCCTCTATC  ATGCCCTCA
201  CCATCAGCTA  CCTGCGCATG  CACCGCCTCT  GCGCCGCAGG  GGAGTGGAAC
251  CAGGTGGGAG  CAGGGGGAGA  ACCACTGGAT  GCCTGCTACC  TGAAGGCCCT
301  GGAGGGCTTC  GTCATGGTGC  TCACCGCCGA  GGGAGACATG  GCTTACCTGT
351  CGGAGAAATGT  CAGCAAACAC  CTGGGCCTCA  GTCAGCTGGA  GCTCATTGGA
401  CACAGCATTCT  TTGATTTCAT  CCACCCCTGT  GACCAAGAGG  AGCTTCAGGA
451  CGCCCTGACC  CCCCCAGCAGA  CCCTGTCCAG  GAGGAAGGTG  GAGGCCCCCA
501  CGGAGCGGGT  CTTCTCCTTG  CGCATGAAGA  GTACGCTCAC  CAGCCGCGGG
551  CGCACCCCTCA  ACCTCAAGGC  GGCCACCTGG  AAGGTGCTGA  ACTGCTCTGG
601  ACATATGAGG  GCCTACAAGC  CACCTGCGCA  GACTTCTCCA  GCTGGGAGCC
651  CTGACTCAGA  GCCCCCGCTG  CAGTGCCTGG  TGCTCATCTG  CGAACGCCATC
701  CCCCCACCCAG  GCAGCCTGGA  GCCCCCACTG  GGCCGAGGGG  CTTTCCTCAG
751  CCGCCACACG  CTGGACATGA  AGTTCACCTA  CTGTGACGAC  AGGATTGCAG
801  AAGTGGCTGG  CTATAGTCCC  GATGACCTGA  TCGGCTGTTTC  CGCCTACGAG
851  TACATCCACG  CGCTGGACTC  CGACGCGGT  AGCAAGAGCA  TCCACACCTT
901  GCTGAGCAAG  GGCCAGGGAG  TAACAGGGCA  GTATCGCTTC  CTGGCCCGGA
951  GTGGTGGCTA  CCTGTGGACC  CAGACCCAGG  CCACAGTGGT  GTCAGGGGGA
1001  CGGGGCCCCC  AGTCGGAGAG  TATCGTCTGT  GTCCATTTC  TAATCAGGTA
1051  AGCAGGAGGA  GGGGCTGGGG  TGGCTGTGTG  TGGGCTCTGAT  CTGCATGTGT
1101  GGACAGGTGT  GTGTGTGTGT  GTGTGTGTGT  GTGTGTGTGT  GCGTATGAGC
1151  ATGCATGTGT  ATCATGCATA  AGTGTATGTG  AGGGAGTGTG  CACGTGTACA
1201  CATATGAGGA  ATGTGTGTCA  CCATGTAAAT  GCGGGTGTGT  GTGTCTGCAT
1251  GGACACAGGT  ATGTGTATGG  GTGTGTAGAC  TGTTAATTTC  TTTTTTTTTT
1301  TTTTTTGCG  TGAACCTCTG  CTTAAGTGG  TTGTTAATTC  AAATTAGAAA
1351  GGGGTCTTTA  TTTGGCCTGG  CATGGTGGCT  CATGCCTGTA  ATCCTAGCAC
1401  TTTGGGAGGC  TGAGGTGGGC  GGATTGCCCTG  AGCTCAGGAG  TTGAAACCCA
1451  GCCTGGGCAA  CATGACGAAA  TGCTGTTCT  GCTAATAATA  CCAAAATTA
1501  GCCGGGTGTG  GTGACACATG  CCTGTGATCC  CAACTACTCG  GGAGGCTGAG
1551  GCACGAGAAAT  CATTAGAACCC  CGGGTGGTGG  AGGCTGCAGT  GAGCCGAGAT
1601  TGCCTCAGTG  CACTCTGGCC  TCGGCAACAG  AGCGAGACTC  TGTCTCAAAC
1651  AAACAAACAA  ACAAAACAAA  GGACTCTATA  TTCAAGTTAA  AATAAGAAGT
1701  GTAACAGAAAT  CATGGGTCT  TTTTTGCTTT  TTAAATTTTG  ATGTGGCTCA
1751  CGCCTGTAAA  TCCCAAGGTG  TTGGGATTAC  AGGCGTGAGC  CACTGCACCC
1801  GGCCCATGTT  GTGGTTTATA  TCAGTAGTTC  CTTTGTAAAT  AGTAAACAGT
1851  ATTCCATGGT  ATGAATAGAG  CACAGTTTTT  TTTTTTATCC  ATTCAACAGT
1901  TAGAACACAT  TGGGCTGTTT  CCAAGTTGG  GTGATTACAA  AAAACAGCTA
1951  CTGTAAACAT  TCTCATACAA  GATTTTATGA  GATCACATGT  TTTCATTTC
2001  CTTGGGTAAA  CAGCTAGGAT  TGGAATGGAT  GGGTTATATA  GTAAGTGTAT
2051  ATTTAATCTA  AGAAACTGCC  ATGGCTGGGC  ACAGTGGCTC  ACGCCTGTAA

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2101 TCCCCAGTACT TTGGGAAGCC AAGGAAGGAG GATGACTAGA GCCTCTGAGG
2151 TGAAGACCCAG CCTGGGCAAA GTGGTTAAGA CTCAACCGCA AAAAAAGAAA
2201 AACAGAAAAC CTGAAAACAA ACCAAAAAAA AAAAAAAA

**Figure 14: SEQ ID NO. 8:
nucleotide sequence of
human HIF3alpha cDNA,
splice variant 3**

Length: 2082 bp

1 GACTGGCGAG CCATGGCGCT GGGGCTGCAG CGCGCAAGGT CGACCACGGA
51 GCTGCGCAAG GAAAAGTCCC GGGATGCGGC CGCGAGCCGG CGCAGGCCAGG
101 AGACCGAGGT GCTGTACCAAG CTGGCTCACA CGCTGCCCTT CGCCCGCGGC
151 GTCAGCGGCC ACCTGGACAA GGCTCTATC ATGCGCCTCA CCATCAGCTA
201 CCTGCGCATG CACCGCCTCT GCGCCGGCAGG GGAGTGGAAC CAGGTGGGAG
251 CAGGGGGAGA ACCACTGGAT GCCTGCTACC TGAAGGCCCT GGAGGGCTTC
301 GTCATGGTGC TCACCGCCGA GGGAGACATG GCTTACCTGT CGGAGAATGT
351 CAGCAAACAC CTGGGCCTCA GTCAGCTGGA GCTCATTGGA CACAGCATCT
401 TTGATTTCAT CCACCCCTGT GACCAACAGG AGCTTCAGGA CGCCCTGACC
451 CCCCAGCAGA CCCGTGCCAG GAGGAAGGTG GAGGCCCGCA CGGAGCGGTG
501 CTTCTCCCTTG CGCATGAAGA GTACGCTCAC CAGCCGGGG CGCACCCCTCA
551 ACCTCAAGGC GGCCACCTGG AAGGTGCTGA ACTGCTCTGG ACATATGAGG
601 GCCTACAAGC CACCTGCGCA GACTTCTCCA GCTGGGAGCC CTGACTCAGA
651 GCCCCCCTG CAGTGCCTGG TGCTCATCTG CGAAGCCATC CCCCACCCAG
701 GCAGCCTGGA GCCCCCACTG GGCGCAGGGG CCTTCCTCAG CCGCCACAGC
751 CTGGACATGA AGTTCACCTA CTGTGACGAC AGGATTGCAG AAGTGGCTGG
801 CTATAGTCCC GATGACCTGA TCGGCTGTT CGCCTACGAG TACATCCACG
851 CGCTGGACTC CGACCGGGTC AGCAAGAGCA TCCACACCTT GCTGAGCAAG
901 GGCCAGGGCAG TAACAGGGCA GTATCGCTTC CTGGCCCGGA GTGGTGGCTA
951 CCTGTGGACC CAGACCCAGG CCACAGTGGT GTCAGGGGG CAAGGGCCCCC
1001 AGTCGGAGAG TATCGTCTGT GTCCATTGTT TAATCAGCCA GGTGGAAGAG
1051 ACCGGAGTGG TGCTGTCCCT GGAGCAAACG GAGCAACACT CTCGCAGACC
1101 CATTCAAGGG GGGCCCCCT CTCAGAAAGGA CACCCCTAAC CCTGGGGACA
1151 GCCTGACAC CCCTGGCCCC CGGATCCTTG CCTTCCTGCA CCCGCCTTCC
1201 CTGAGCGAGG CTGCCCTGGC CGCTGACCCC CGCCGTTCT GCAGCCCTGA
1251 CCTCCGTCGC CTCCCTGGAC CCATCCTGGA TGGGGCTTCA GTAGCAGCCA
1301 CTCCCAGCAC CCCGCTGGCC ACACGGCACC CCCAAAGTCC TCTTCGGCT
1351 GATCTCCAG ATGAACCTACC TGTGGGCACC GAGAAATGTGC ACAGACTCTT
1401 CACCTCCGGG AAAGACACTG AGGCAGTGGA GACAGATTAA GATATAGCTC
1451 AGGATGCTGA TGCTCTGGAT TTGGAGATGC TGGCCCCCTA CATCTCCATG
1501 GATGATGACT TCCAGCTCAA CGCCAGCGAG CAGCTACCCA GGGCTTACCA
1551 CAGACCTCTG GGGGCTGTCC CCCGGCCCCG TGCTCGGAGC TTCCATGGCC
1601 TGTCACCTCC AGCCCTTGAG CCCTCCCTGC TACCCCGCTG GGGGAGTGAC
1651 CCCCGGCTGA GCTGCTCCAG CCCTTCCAGA GGGGACCCCT CAGCATCCTC
1701 TCCCAGGCT GGGGCTCGGA AGAGGACCT GGGCCAGAGC TCAGAGGACG
1751 AGGACGAGGG AGTGGAGCTG CTGGGAGTGA GACCTCCCAA AAGGTCCCCC
1801 AGCCCAGAAC ACGAAAACCTT TCTGCTCTTT CCTCTCAGCC TGGTGTGTTG
1851 GGGGATTAAT GGGATTCTCT GGCCCTCATT ACCTAGCTGG CTTAACCTA
1901 CTGTTTATA GATAGGAAAC CAGAGAGGGG CAGGGGCTGG TTGAGGGTCA
1951 TACAGAAAGT CAGTGGGCCA GCTGAGACTA AAGCCTGATC TTCTAGTTTC
2001 ACTAATGGGT ATTAAAAACC TCTGCAGTGA ACTGAGATTG CGCCACTGCA
2051 CCCCAGCAGT AGCGACAGAA TGGGACCTTG TC

Figure 15: SEQ ID NO. 9:
nucleotide sequence of
human HIF3alpha cDNA,
splice variant 5

Length: 2595 bp

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1  AACTCGCACC CGGGTCCTGG CTGCACCGCA TCCCCTCCGT CACCCCTGG
51  ATGGCCCTTC AGCCAACGGG GGCCTGGCG ATGGTCGACC ACGGAGCTGC
101 GCAAGGAAAA GTCCCAGGAT GCGGCCCGCA GCCGGCGCAG CCAGGAGACC
151 GAGGTGCTGT ACCAGCTGGC TCACACGCTG CCCTTCGCCG CGGGCGTCAG
201 CGCCCCACCTG GACAAGGCCT CTATCATGCG CCTCACCATC AGCTACCTGC
251 GCATGCACCG CCTCTGCGCC GCAGGGGAGT GGAACCCAGGT GGGAGCAGGG
301 GGAGAACACAC TGGATGCCTG CTACCTGAAG CCCCTGGAGG GCTTCGTCAT
351 GGTGCTCACC GCCGAGGGAG ACATGGCTTA CCTGTCGGAG AATGTCAGCA
401 AACACCTGGG CCTCAGTCAG CTGGAGCTCA TTGGACACAG CATCTTGAT
451 TTCATCCACC CCTGTGACCA AGAGGAGCTT CAGGACGCC TGACCCCCCA
501 GCAGACCCCTG TCCAGGAGGA AGGTGGAGGC CCCCACGGAG CGGTGCTTCT
551 CCTTGCACAT GAAGAGTACG CTCACCCAGCC CGGGGCGCAC CCTCAACCTC
601 AAGGCGGCCA CCTGGAAGGT GCTGAACCTGC TCTGGACATA TGAGGGCCTA
651 CAAGCCACCT GCGCAGACTT CTCCAGCTGG GAGCCCTGAC TCAGAGCCCC
701 CGCTGCAGTG CCTGGTGCTC ATCTGCGAAG CCATCCCCA CCCAGGCAGC
751 CTGGAGCCCC CACTGGGCCG AGGGGCCTTC CTCAGCCGCC ACAGCCTGGA
801 CATGAAGTTC ACCTACTGTG ACGACAGGAT TGCAGAAGTG GCTGGCTATA
851 GTCCCGATGTA CCTGATCGGC TGTTCCGCCT ACGAGTACAT CCACCGCTG
901 GACTCCGACG CGGTCAAGCA GAGCATCCAC ACCTTGCTGA GCAAGGGCCA
951 GGCAGTAACA GGGCAGTATC GCTTCCTGGC CGGGAGTGGT GGCTACCTGT
1001 GGACCCAGAC CCAGGCCACA GTGGTGTCAAG GGGGACGGGG CCCCCAGTCG
1051 GAGAGTATCG TCTGTGTCCA TTTTTTAATC AGCCAGGTGG AAGAGACCGG
1101 AGTGGTGCTG TCCCTGGAGC AAACGGAGCA ACACCTCTGC AGACCCATTG
1151 AGCGGGGCGC CCCCTCTCAG AAGGACACCC CTAACCCCTGG GGACAGCCTT
1201 GACACCCCTG GCCCCCGGAT CCTTGCTTC CTGCACCCGC CTTCCCTGAG
1251 CGAGGCTGCC CTGGCCGCTG ACCCCCCCGC TTTCTGCAGC CCTGACCTCC
1301 GTCGCCTCCT GGGACCCATC CTGGATGGGG CTTCACTGAGC AGCCACTCCC
1351 AGCACCCCGC TGGCCACACG GCACCCCCAA AGTCCTCTTT CGGCTGATCT
1401 CCCAGATGAA CTACCTGTGG GCACCGAGAA TGTGCACAGA CTCTCACCT
1451 CCGGGAAAGA CACTGAGGCA GTGGAGACAG ATTTAGATAT AGCTCAGGAT
1501 GCTGATGCTC TGGATTTGGA GATGCTGGCC CCCTACATCT CCATGGATGA
1551 TGACTTCCAG CTCAACGCCA GCGAGCAGCT ACCCAGGGCC TACCACAGAC
1601 CTCTGGGGC TGTCACCCGG CCCCCTGCTC GGAGCTTCCA TGGCCTGTCA
1651 CCTCCAGGCC TTGAGCCCTC CCTGCTACCC CGCTGGGGGA GTGACCCCCG
1701 GCTGAGCTGC TCCAGCCCTT CCAGAGGGGA CCCCTCAGCA TCCTCTCCCA
1751 TGGCTGGGGC TCAGGAAGAGG ACCCTGGCCC AGAGCTCAGA GGACGGAGAC
1801 GAGGGAGTGG AGCTGCTGGG AGTGAGACCT CCCAAAGGT CCCCCAGCCC
1851 AGAACACGAA AACTTCTGC TCTTCCTCT CAGCCTGAGT TTCCCTCTGA
1901 CAGGAGGACC AGCCCCAGGG AGCCTGCAGG ACCCCACTGA ACTTACCCAA
1951 TTCCCTCTTT CAGCTTAAG TTTTCCATT CTAGACCCCT ACCCTCTAGG
2001 CTGTGCTGCT CCTGGACTTC ATGCCTCTCC ATTCTCATG CCTACAATCT
2051 CTGTGCCCA GAACCCCCCTC CACTCCCCAC CCCAGCCCTC CAGACATGCA
2101 CTTACCTTGA CTTTACCCCA CATGTTGGG GCACCTGGGG CTCCCTCACC

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2151 CCTTGGGTGG TTTGCAATCT GAAGACTTCT CCAGCCACAC AGGCACATGC
2201 ACAGGCACGG TGCTGTCTGC ATATTGCCAG GTGGGGAGAG AAGCCAGGAC
2251 CCCTCAGCTG TCTGCCACCA TCTATGTGCC TCCCTTACCC CCCAGCTTTC
2301 TTTCTACAGA TGGTGCTACT CTTGGTCTCC CACAGGAAAA GGCCCTCCCC
2351 CTTCTTAGCC CCATTTACCC CGTTTGTGGA AGGCACGTGCT CGCTCTGTTT
2401 TGTCAGAGAG TGGCCTATCC AGATTGGTGC TATGGGGGGG TCTGACCCCT
2451 CCCTCCTCCC TCTGGAGGTG ATGTGGGCC CAAATGGAGG GAATTGTGCT
2501 GGGCTAGGGA AAGGGGAGGG ACTAGACTGG CCACACTGGC TCTGAAACTC
2551 ACCAAtCTCT ATACACCATA AAGACCTCAC CTTGGTAGGC ACCAG

Fig. 16: SEQ ID NO. 10:
nucleotide sequence of human
HIF3alpha splice variant 1
coding sequence

Length: 1353 bp

```
1  ATGCCGGCCCG CAGCCGGCGC AGCCAGGAGA CCGAGGTGCT GTACCAGCTG
 51  GCTCACACGC TGCCCTTCGC CCGCGGCGTC AGCGCCCACC TGGACAAGGC
101  CTCTATCATG CGCCTCACCA TCAGCTACCT GCGCATGCAC CGCCTCTGCG
151  CCGCAGCTGG AGCTCATTGG ACACAGCATC TTTGATTCA TCCACCCCTG
201  TGACCCAAGAG GAGCTTCAGG ACGCCCTGAC CCCCCAGCAG ACCCTGTCCA
251  GGAGGAAGGT GGAGGGCCCC ACGGAGCGGT GCTTCTCCTT GCGCATGAAG
301  AGTACACTCA CCAGCCGGG CGGCACCCCTC AACCTCAAGG CGGCCACCTG
351  GAAGGTGCTG AACTGCTCTG GACATATGAG GGCTTACAAG CCACCTGCGC
401  AGACTTCTCC AGCTGGGAGC CCTGACTCAG AGCCCCCGCT GCAGTGCCTG
451  GTGCTCATCT GCGAAGCCAT CCCCCCACCA GGCAAGCTGG AGCCCCCACT
501  GGGCCGAGGG GCCTTCCTCA GCCGCCACAG CCTGGACATG AAGTTCACCT
551  ACTGTGACGA CAGGATTGCA GAAGTGGCTG GCTATAGTCC CGATGACCTG
601  ATCGGCTGTT CCGCCTACGA GTACATCCAC GCGCTGGACT CCGATGCGGT
651  CAGCAAGAGC ATCCACACCT TGCTGAGCAA GGGCCAGGCA GTAACAGGGC
701  AGTATCGCTT CCTGGCCCGG AGTGGTGGCT ACCTGTGGAC CCAGACCCAG
751  GCCACAGTGG TGTCAAGGGG ACGGGGCCCC CAGTCGGAGA GTATCGTCTG
801  TGTCCATTTC TTAATCAGCC AGGTGGAAGA GACCGGAGTG GTGCTGTCCC
851  TGGAGCAAAC GGAGCAACAC TCTCGCAGAC CCATTCAAGG GGGCGCCCCC
901  TCTCAGAAGG ACACCCCTAA CCCTGGGAC AGCCTTGACA CCCCTGGCCC
951  CCGGATCCTT GCCTTCCTGC ACCCGCCCTC CCTGAGCGAG GCTGCCCTGG
1001 CCGCTGACCC CCGCCGTTTC TGCAGCCCTG ACCTCCGTG CCTCCTGGGA
1051 CCCATCCTGG ATGGGGCTTC AGTAGCAGCC ACTCCCAGCA CCCCGCTGGC
1101 CACACGGCAC CCCCCAAAGTC CTCTTTCGGC TGATCTCCCA GATGAACCTAC
1151 CTGTGGGCAC CGAGAAATGTG CACAGACTCT TCACCTCCGG GAAAGACACT
1201 GAGGCAGTGG AGACAGATT AGATATAGCT CAGGACCCCA GCACCCCACT
1251 CCTGAACCTG AATGAGCCCC TGGGTTTCA CTTTGTCAACC CAGTCTGGAG
1301 TGCAGTGGCA CAAACACAGC TCACCGCAGC CTCGACCTCC TGGGCTCAAG
1351 TGA
```

Fig. 17: SEQ ID NO. 11:
nucleotide sequence of human
HIF3alpha splice variant 2
coding sequence

Length: 1029 bp

```
1  ATGGCGCTGG  GGCTGCAGCG  CGCAAGGTGCG  ACCACGGAGC  TGCAGCAAGGA
51  AAAGTCCCAGG  GATGCGGCC  GCAGCCGGCG  CAGCCAGGAG  ACCGAGGTGCG
101  TGTACCAGCT  GGCTCACACG  CTGCCCTTCG  CCCGCGGGCGT  CAGCGCCCAC
151  CTGGACAAAGG  CCTCTATCAT  GCGCCTCACCC  ATCAGCTACC  TGCGCATGCA
201  CCGCCTCTGC  GCCGCAGGGG  AGTGGAAACCA  GGTGGGAGGCA  GGGGGAGAAC
251  CACTGGATGC  CTGCTACCTG  AAGGCCCTGG  AGGGCTTCGT  CATGGTGCTC
301  ACCGCCGAGG  GAGACATGGC  TTACCTGTGCG  GAGAATGTCA  GCAAACACCT
351  GGGCCTCAGT  CAGCTGGAGC  TCATTGGACA  CAGCCTCTT  GATTTCATCC
401  ACCCCTGTGA  CCAAGAGGAG  CTTCAGGACG  CCCTGACCCC  CCAGCAGACC
451  CTGTCCAGGA  GGAAGGGTGG  GGCCCCCACG  GAGCGGGTGT  TCTCCTTGCG
501  CATGAAGAGT  ACGCTCACCA  GCCGCAGGGCG  CACCCCTCAAC  CTCAAGGCAGG
551  CCACCTGGAA  GGTGCTGAAC  TGCTCTGGAC  ATATGAGGGC  CTACAAGCCA
601  CCTGCGCAGA  CTTCTCCAGC  TGGGAGCCCT  GACTCAGAGC  CCCCGCTGCA
651  GTGCCTGGTG  CTCATCTGCG  AAGCCATCCC  CCACCCAGGC  AGCCTGGAGC
701  CCCCCACTGGG  CCGAGGGGCC  TTCCCTCAGCC  GCCACAGCCT  GGACATGAAG
751  TTCACCTACT  GTGACCGACAG  GATTGCAGAA  GTGGCTGGCT  ATAGTCCCGA
801  TGACCTGATC  GGCTGTTCCG  CCTACGAGTA  CATCCACGGC  CTGGACTCCG
851  ACGCGGTCAG  CAAGAGCATC  CACACCTTGC  TGAGCAAGGG  CCAGGCAGTA
901  ACAGGGCAGT  ATCGCTTCCT  GGCCCGGAGT  GGTGGCTACC  TGTGGACCCA
951  GACCCAGGCC  ACAGTGGTGT  CAGGGGGACG  GGGCCCCCAG  TCGGAGAGTA
1001  TCGTCTGTGT  CCATTTTTA  ATCAGGTAA
```

Fig. 18: SEQ ID NO. 12:
nucleotide sequence of human
HIF3alpha splice variant 3
coding sequence

Length: 1899 bp

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1  ATGGCGCTGG  GGCTGCAGCG  CGCAAGGTGCG  ACCACGGAGC  TGCAGCAAGGA
51  AAAGTCCCAGG  GATGCCGCC  GCAGCCGGCG  CAGCCAGGAG  ACCGAGGTGCG
101  TGTACCAAGCT  GGCTCACACG  CTGCCCTTCG  CCCGCAGCGT  CAGCGCCAC
151  CTGGACAAGG  CCTCTATCAT  GCGCCTCACCC  ATCAGCTACC  TGCAGCATGCA
201  CCGCCTCTGC  GCCGCAGGGG  AGTGGAAACCA  GGTGGGAGCA  GGGGGAGAAC
251  CACTGGATGC  CTGCTACCTG  AAGGCCCTGG  AGGGCTTCGT  CATGGTGCTC
301  ACCGCCGAGG  GAGACATGGC  TTACCTGTGCG  GAGAATGTCA  GCAAACACCT
351  GGGCCTCAGT  CAGCTGGAGC  TCATTGGACA  CAGCAGCTTT  GATTTCATCC
401  ACCCCTGTGA  CCAAGAGGAG  CTTCAGGACG  CCCTGACCCC  CCAGCAGACC
451  CTGTCCAGGA  GGAAGGTGGA  GGCCCCCACG  GAGCGGTGCT  TCTCCTTGCG
501  CATGAAGAGT  ACGCTCACCA  GCCGCAGGGCG  CACCCCTCAAC  CTCAAGGGCGG
551  CCACCTGGAA  GGTGCTGAAC  TGCTCTGGAC  ATATGAGGGC  CTACAAGCCA
601  CCTGCAGCAGA  CTTCTCCAGC  TGGGAGCCCT  GACTCAGAGC  CCCCCTGCA
651  GTGCCTGGTG  CTCATCTGCG  AAGCCATCCC  CCACCCAGGC  AGCCTGGAGC
701  CCCCACGGGG  CCGAGGGGCC  TTCTCTCAGCC  GCCACAGCCT  GGACATGAAG
751  TTCACCTACT  GTGACGACAG  GATTGCAGAA  GTGGCTGGCT  ATAGTCCCGA
801  TGACCTGATC  CGCTGTTCCG  CCTACGAGTA  CATCCACGGC  CTGGACTCCG
851  ACGCGGTGAG  CAAGAGCATC  CACACCTGCG  TGAGCAAGGG  CCAGGCAGTA
901  ACAGGGCAGT  ATCGCTTCCT  GGCCCGGAGT  GGTGGCTACC  TGTGGACCCA
951  GACCCAGGCC  ACAGTGGTGT  CAGGGGGACG  GGCCCCCAG  TCGGAGAGTA
1001  TCGCTCTGTG  CCATTTTTA  ATCAGCCAGG  TGGAAAGAGAC  CGGAGTGGTG
1051  CTGTCCCTGG  AGCAAACGGA  GCAACACTCT  CGCAGACCCA  TTCAGCGGGG
1101  CGCCCCCTCT  CAGAAGGACA  CCCCTAACCC  TGGGGACAGC  CTTGACACCC
1151  CTGGCCCCCG  GATCCTTGCC  TTCTGCACC  CGCCTTCCCT  GAGCGAGGCT
1201  GCCCTGGCCG  CTGACCCCCCG  CCGTTTCTGC  AGCCCTGACC  TCCGTCGCCT
1251  CCTGGGACCC  ATCCTGGATG  GGGCTTCAGT  AGCAGCCACT  CCCAGCACCC
1301  CGCTGGCCAC  ACGGCACCCC  CAAAGTCCTC  TTTCGGCTGA  TCTCCCAGAT
1351  GAACTACCTG  TGGGCACCGA  GAATGTGCAC  AGACTCTTCA  CCTCCGGGAA
1401  AGACACTGAG  GCAGTGGAGA  CAGATTTAGA  TATAGCTCAG  GATGCTGATG
1451  CTCTGGATT  GGAGATGCTG  GCCCCCTACA  TCTCCATGGA  TGATGACTTC
1501  CAGCTCAACG  CCAGCGAGCA  GCTACCCAGG  GCCTACCCACA  GACCTCTGGG
1551  GGCTGTCCCC  CGGGCCCCGTG  CTCGGAGCTT  CCATGGCCCTG  TCACCTCCAG
1601  CCCTTGAGCC  CTCCCTGCTA  CCCCCCTGGG  GGAGTGACCC  CCGGCTGAGC
1651  TGCTCCAGCC  CTTCCAGAGG  GGACCCCTCA  GCATCCTCTC  CCATGGCTGG
1701  GGCTCGGAAG  AGGACCCCTGG  CCCAGAGCTC  AGAGGACGAG  GACGGAGGGAG
1751  TGGAGCTGCT  GGGAGTGAGA  CCTCCCCAAA  GGTCCCCCAG  CCCAGAACAC
1801  GAAAACTTTC  TGCTCTTCC  TCTCAGCCTG  GTGTGTTGGG  GGATTAATGG
1851  GATTCTCTGG  CCCTCATTAC  CTAGCTGGCT  TAAACCTACT  GTTTTATAG

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Fig. 19: SEQ ID NO. 13:
nucleotide sequence of human
HIF3alpha splice variant 5
coding sequence

Length: 1947 bp

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1  ATGCGCCTCA CCATCAGCTA CCTGCGCATG CACCGCCTCT GCGCCGCAGG
51  GGAGTGGAAAC CAGGTGGGAG CAGGGGGAGA ACCACTGGAT GCCTGCTACC
101 TGAAGGGCCCT GGAGGGCTTC GTCATGGTGC TCACCGCCGA GGGAGACATG
151 GCTTACCTGT CGGAGAAATGT CAGCAAACAC CTGGGCCTCA GTCAGCTGGA
201 GCTCATTGGA CACAGCATCT TTGATTTCAT CCACCCCTGT GACCAAGAGG
251 AGCTTCAGGA CGCCCTGACC CCCCAGCAGA CCCTGTCCAG GAGGAAGGTG
301 GAGGGCCCCA CGGAGCGGTG CTTCTCCTTG CGCATGAAGA GTACGCTCAC
351 CAGCCGCGGG CGCACCCCTCA ACCTCAAGGC GGCCACCTGG AAGGTGCTGA
401 ACTGCTCTGG ACATATGAGG GCCTACAAGC CACCTGCGCA GACTTCTCCA
451 GCTGGGAGCC CTGACTCAGA GCCCCCCGCTG CAGTGCCTGG TGCTCATCTG
501 CGAACCCATC CCCCACCCAG GCAGCCTGGA GCCCCCCACTG GGCCGAGGGG
551 CCTTCCTCAG CGGCCACAGC CTGGACATGA AGTTCACCTA CTGTGACGAC
601 AGGATTGCAG AAGTGGCTGG CTATAGTCCC GATGACCTGA TCGGCTGTTG
651 CGCCTACGAG TACATCCACG CGCTGGACTC CGACGCGGTG AGCAAGAGCA
701 TCCACACCTT GCTGAGCAAG GGCCAGGCAG TAACAGGGCA GTATCGCTTC
751 CTGGCCCGGA GTGGTGGCTA CCTGTGGACC CAGACCCAGG CCACAGTGGT
801 GTCAGGGGGA CGGGGGCCCC AGTCGGAGAG TATCGTCTGT GTCCATTGTT
851 TAATCAGCCA GGTGGAAGAG ACCGGAGTGG TGCTGTCCCT GGAGCAAACG
901 GAGCAACACT CTCGCAGACC CATTCAAGCGG GGCGCCCCCT CTCAGAAAGGA
951 CACCCCTAAC CCTGGGGACA GCCTTGACAC CCCTGGCCCC CGGATCCTTG
1001 CCTTCCTGCA CCCGCCCTCC CTGAGCGAGG CTGCCCTGGC CGCTGACCCC
1051 CGCCGTTTCT GCAGCCCTGA CCTCCGTGCG CTCCCTGGGAC CCATCCTGGA
1101 TGGGGCTTCA GTAGCAGCCA CTCCCAGCAC CCCGCTGGGC ACACGGCACC
1151 CCCAAAGTCC TCTTCGGCT GATCTCCCAG ATGAACCTACC TGTGGGCACC
1201 GAGAATGTGC ACAGACTCTT CACCTCCGGG AAAGACACTG AGGCAGTGGA
1251 GACAGATTG AATAGCTC AGGATGCTGA TGCTCTGGAT TTGGAGATGTC
1301 TGGCCCCCTA CATCTCCATG GATGATGACT TCCAGCTCAA CGCCAGCGAG
1351 CAGCTACCCA GGGCCTACCA CAGACCTCTG GGGGCTGTCC CCCGGCCCCG
1401 TGCTCGGAGC TTCCATGGCC TGTCACCTCC AGCCCTTGAG CCCTCCCTGC
1451 TACCCCGCTG GGGGAGTGAC CCCCGGCTGA GCTGCTCCAG CCCTTCCAGA
1501 GGGGACCCCT CAGCATTCTC TCCCCTGGCT GGGGCTCGGA AGAGGACCCCT
1551 GGCCAGAGC TCAGAGGACG AGGACGAGGG AGTGGAGCTG CTGGGAGTGA
1601 GACCTCCAA AAGTCCCCC AGCCAGAAC AGAAAACCTT TCTGCTCTTT
1651 CCTCTCAGCC TGAGTTCCCT TCTGACAGGA GGACCAGCCC CAGGGAGCCT
1701 GCAGGACCCC ACTGAACCTA CCCAATTCTC TCTTCAGTC TTAAGTTTTC
1751 CCATTCTAGA CCCCTACCCCT CTAGGCTGTG CTGCTCCTGG ACTTCATGCC
1801 TCTCCATTCT CATTGCCTAC AATCTCTGTG CCCCCAGAACCC CCCTCCACTT
1851 CCCACCCCCAG CCCTCCAGAC ATGCACTTAC CTTGACTTTA CCCCCACATGT
1901 TTGGGGCACC TGGGGCTCCC TCACCCCTTG GGTGGTTGCA AATCTGA

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Fig. 20: Schematic assembly of SEQ ID NO. 6, with human ESTs and human mRNA (AK021421)

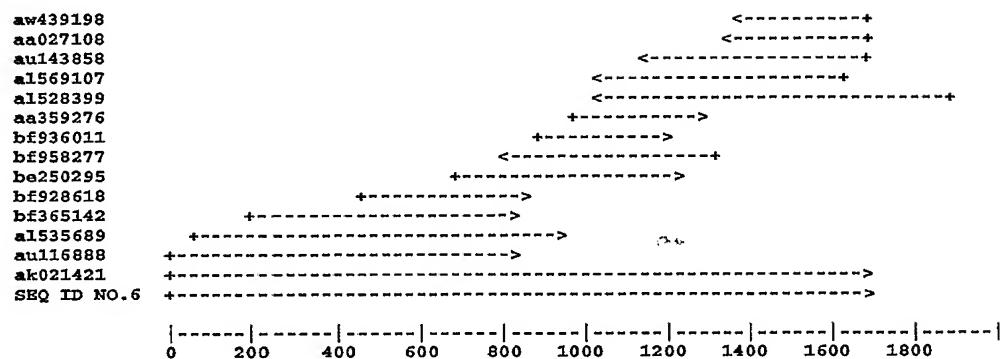
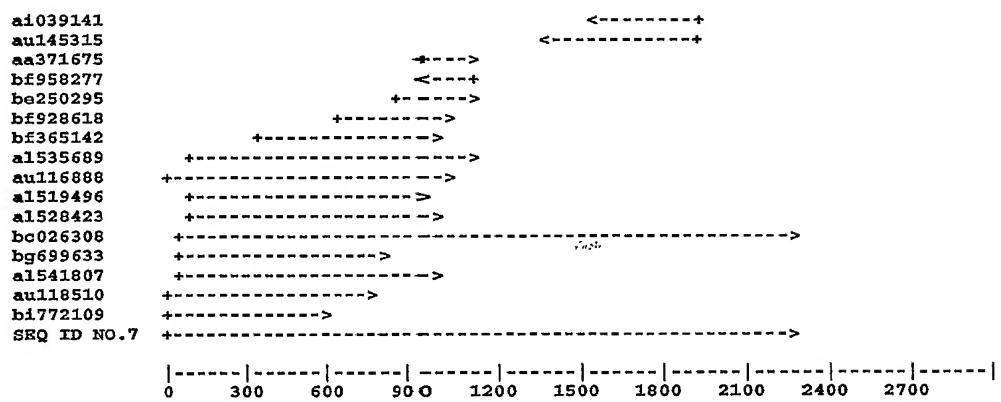


Fig. 21: Schematic assembly of SEQ ID NO. 7, with human ESTs and human mRNA (BC026308)



**Fig. 22: Schematic assembly of SEQ ID NO. 8,
with human ESTs and
human mRNAs (AK021421, AK021653,
AK027725, AB054067, AF463492)**

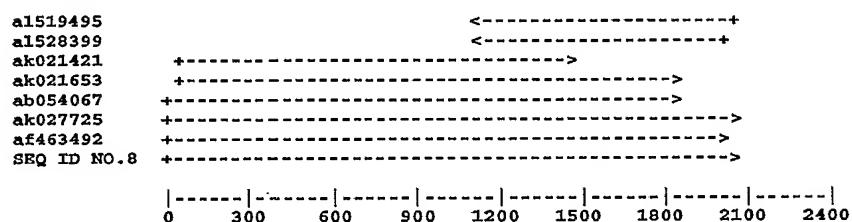


Fig. 23: Schematic assembly of SEQ ID NO. 9, with human ESTs and human mRNA (AKO 21653)

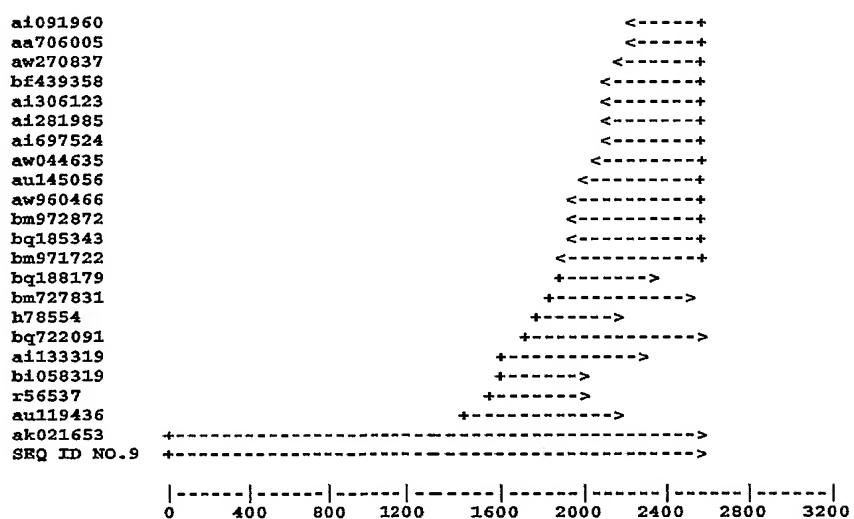


Fig. 24: Identification of differentially expressed genes by microarray hybridization

Biochip	Type of probe	Used probes (Cy5-/Cy3-labeled)	Ratio fluorescence intensity: temporal / frontal cortex
1	C	PT _{SSH(2)} / PF _{SSH(1)}	1.40
2	B	PT / PF	1.19
3	A	PT / PF	0.65
4	C	PT _{SSH(4)} / CT _{SSH(3)}	0.65
7	B	CF / PF	0.95

Fig. 25 :

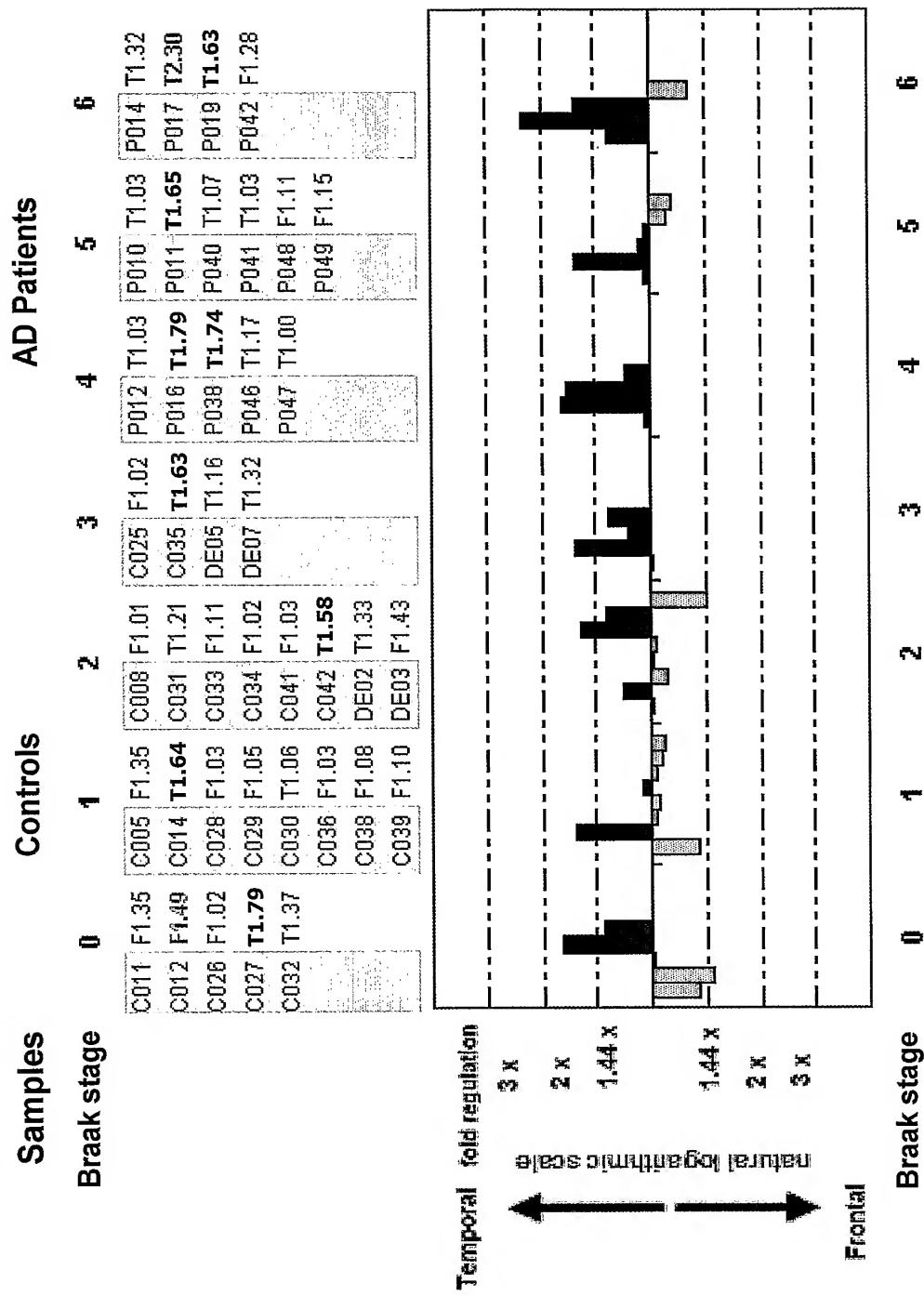
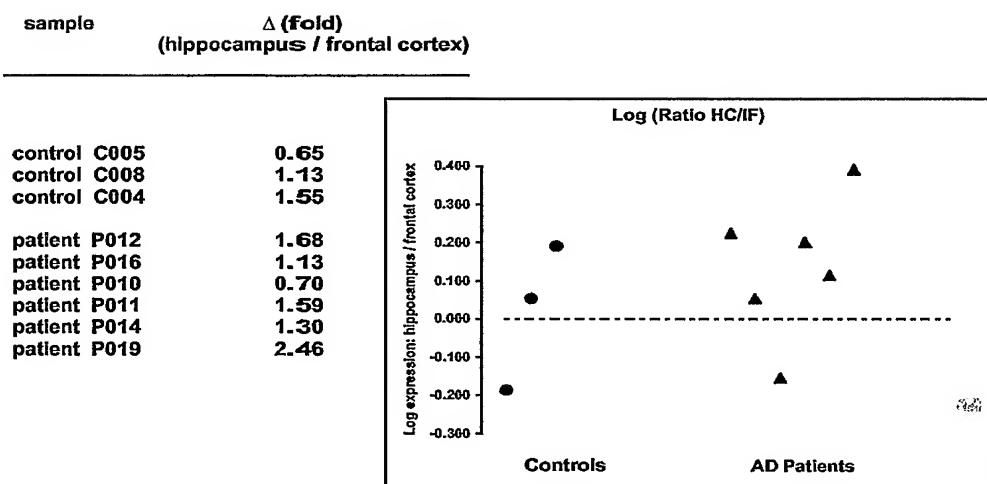
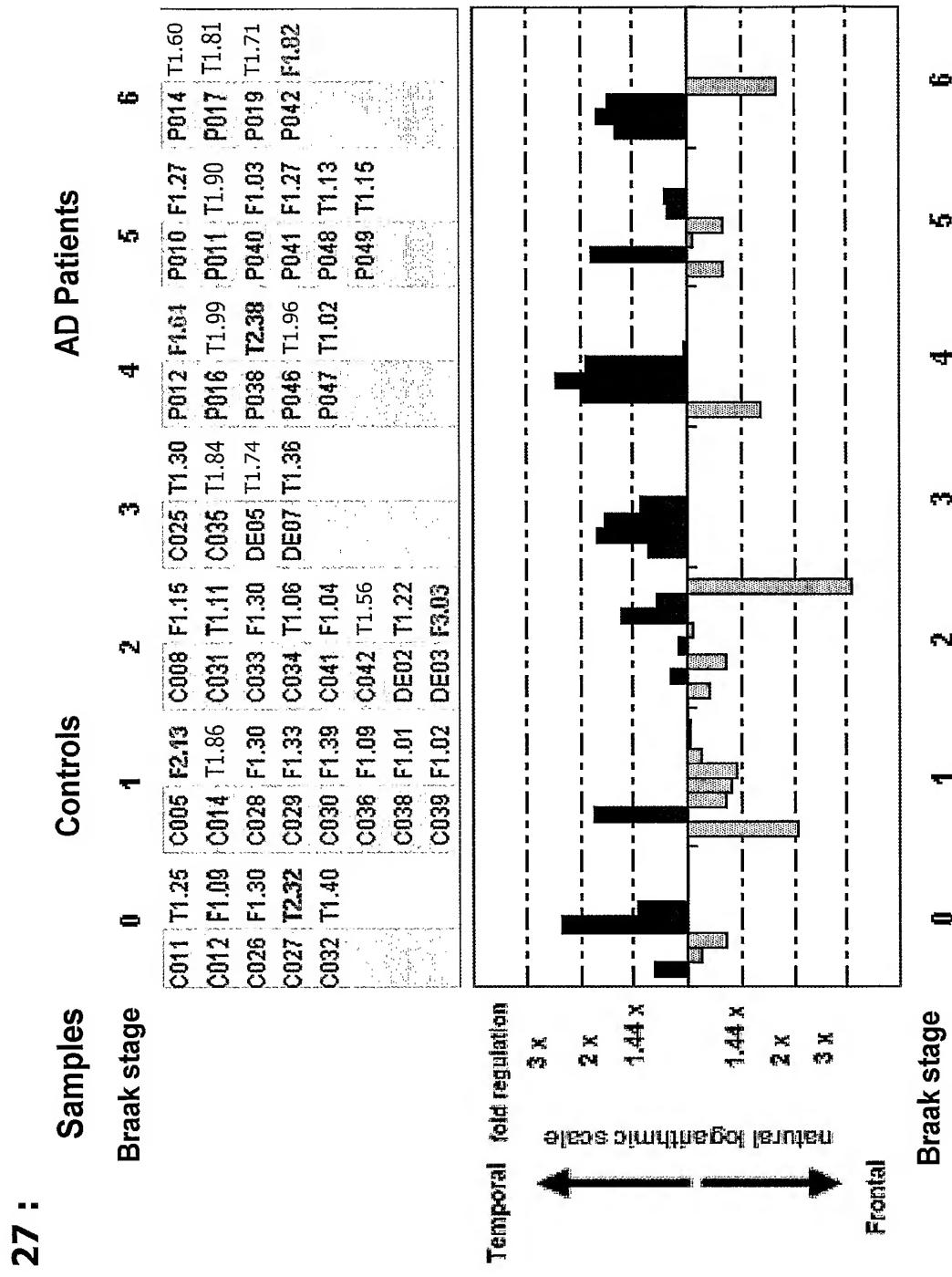


Fig. 26 :



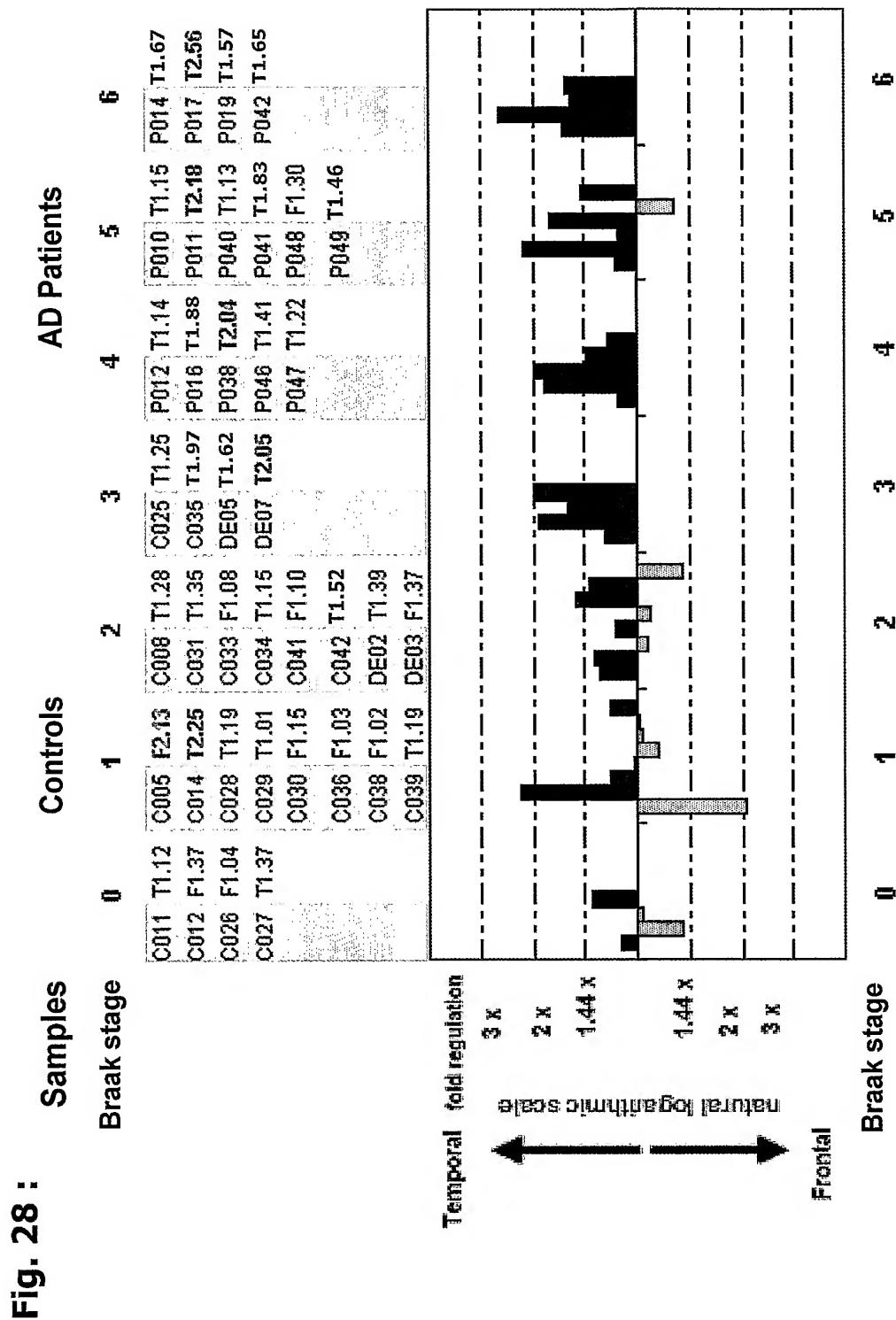


Fig. 29 :

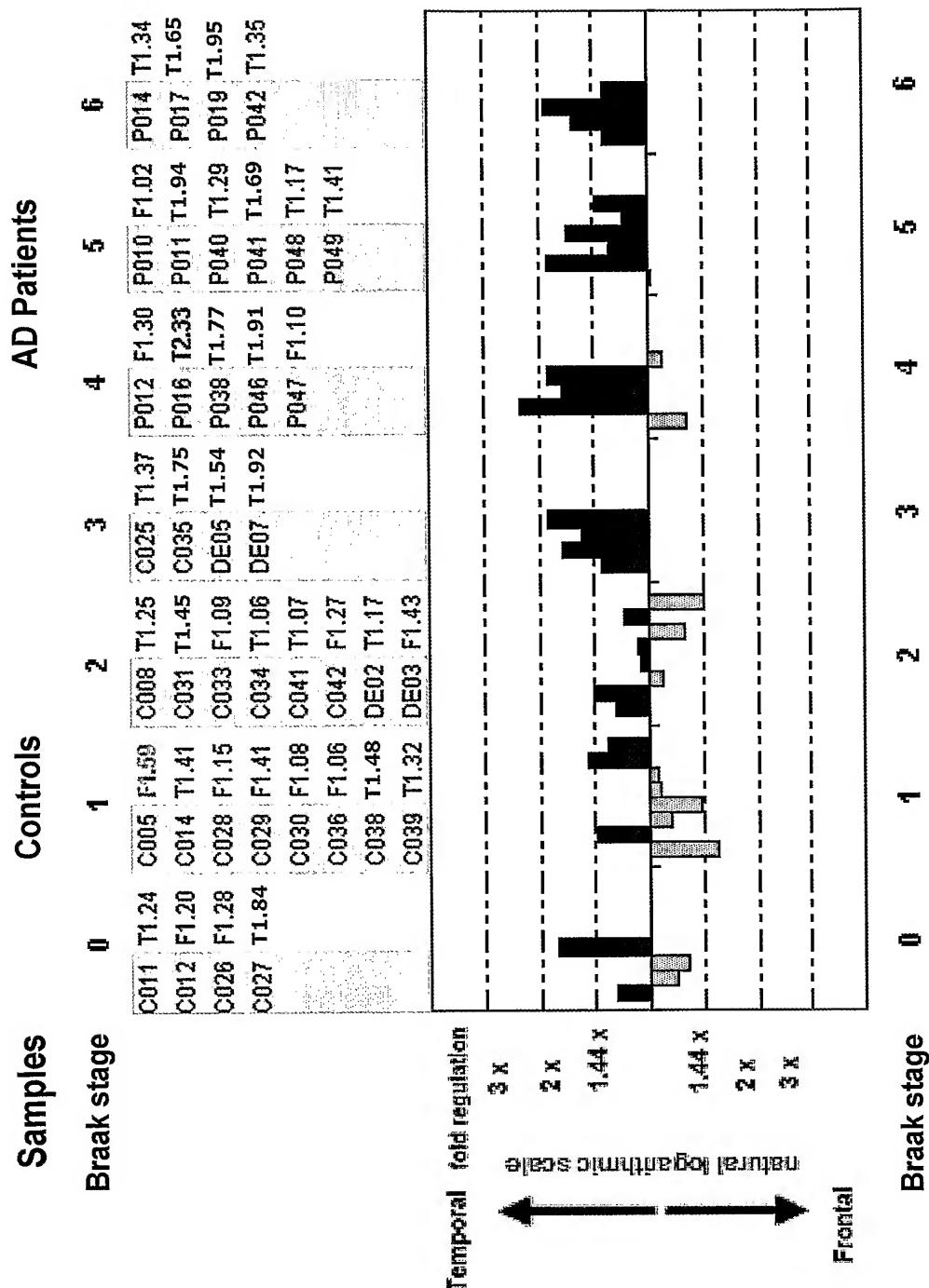


Fig. 30: Analysis of absolute mRNA expression of HIF3alpha splice variant 1

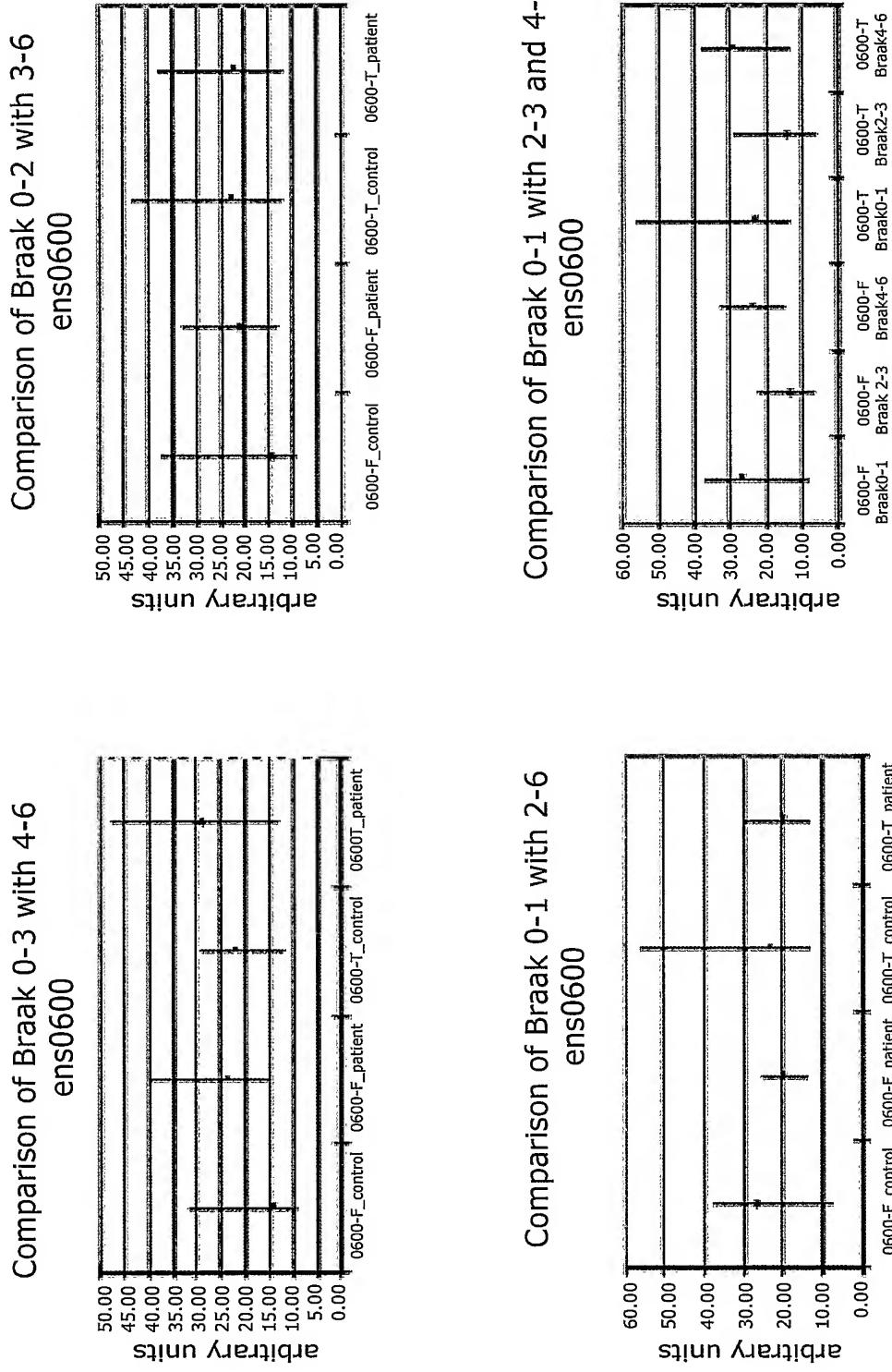
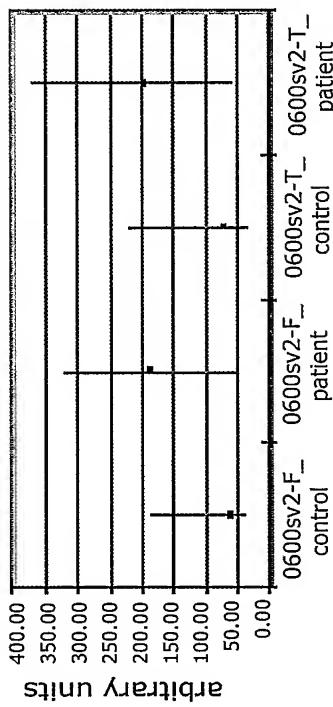
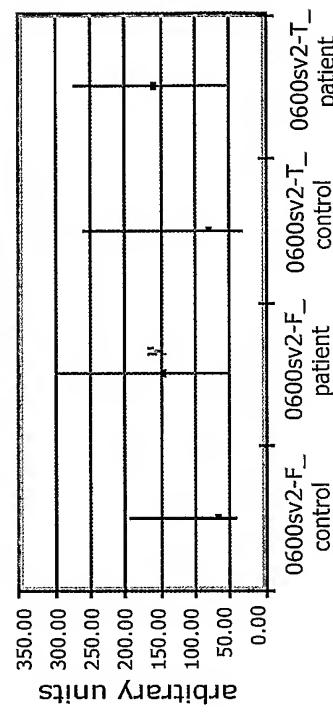


Fig. 31: Analysis of absolute mRNA expression of HIF3alpha splice variant 2

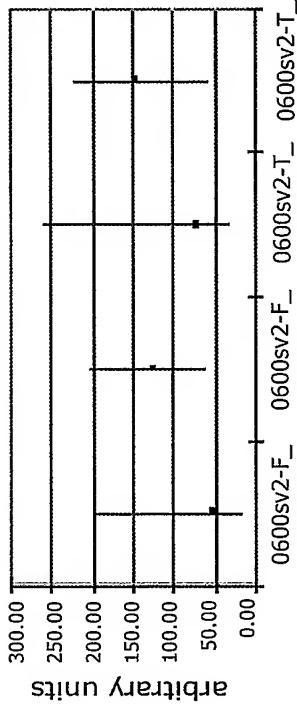
Comparison of Braak 0-3 with 4-6
ens0600sv2



Comparison of Braak 0-2 with 3-6
ens0600sv2



Comparison of Braak 0-1 with 2-3 and 4-6
ens0600sv2



Comparison of Braak 0-2 with 3-6
ens0600sv2

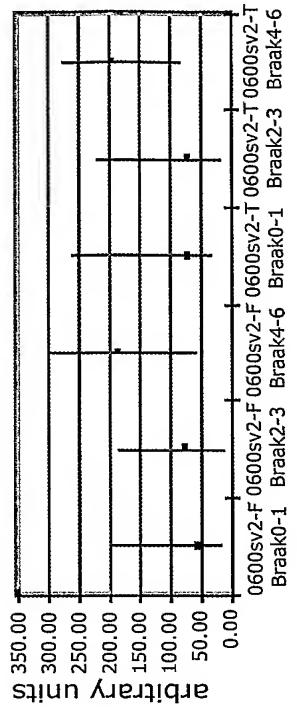


Fig. 32: Analysis of absolute mRNA expression of HIF3alpha splice variant 3

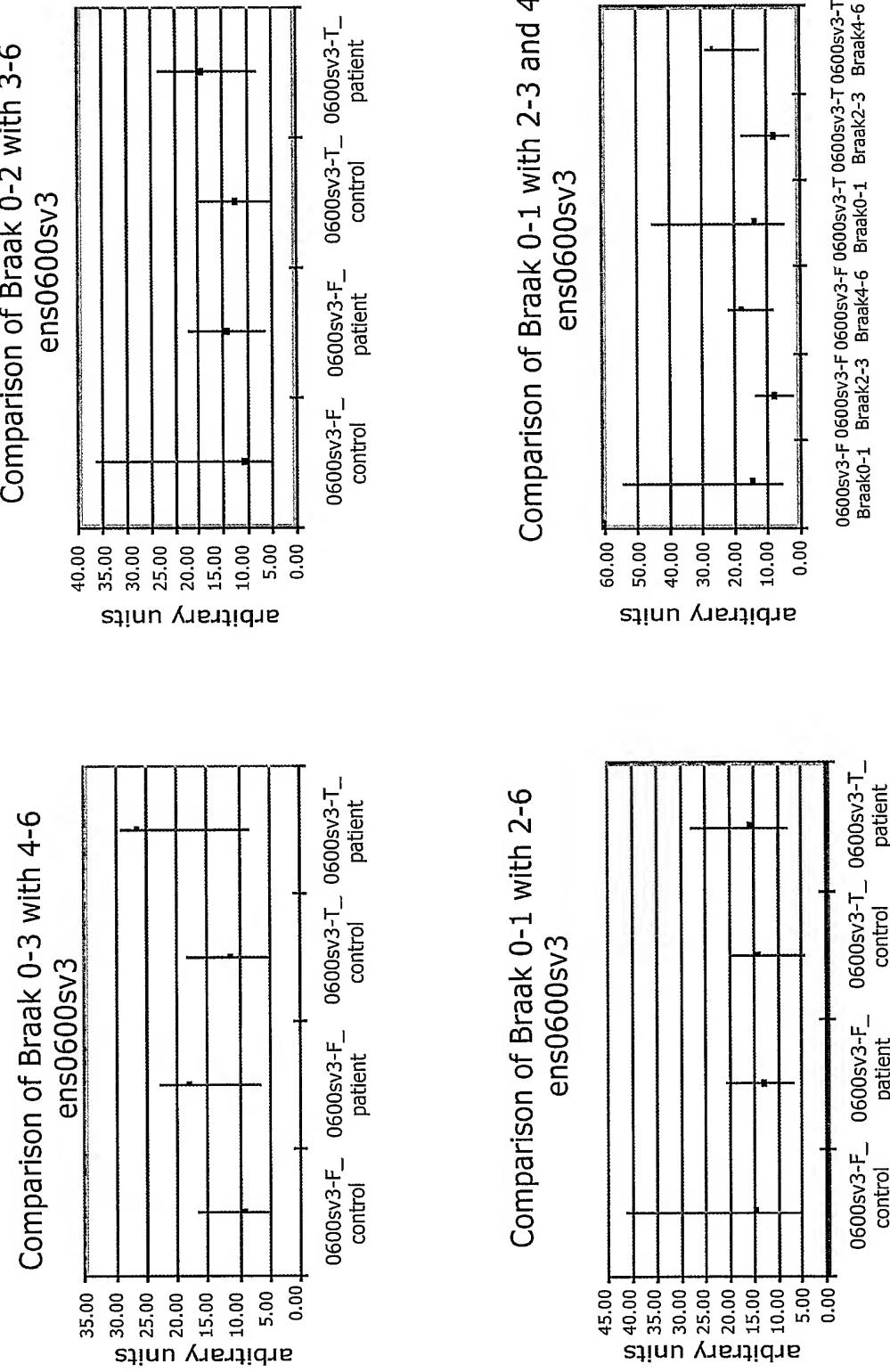


Fig. 33: Analysis of absolute mRNA expression of HIF3alpha splice variant 5

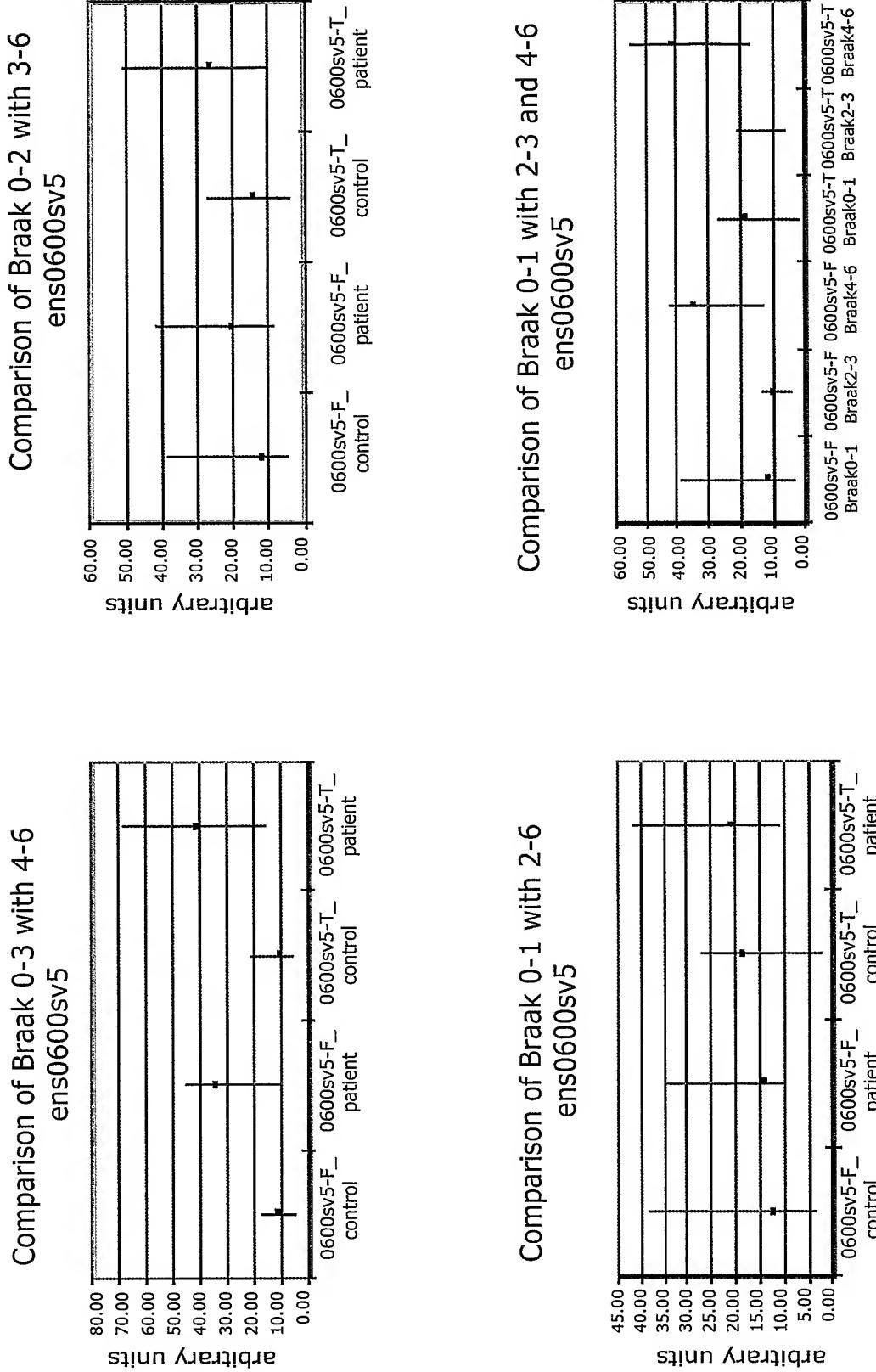
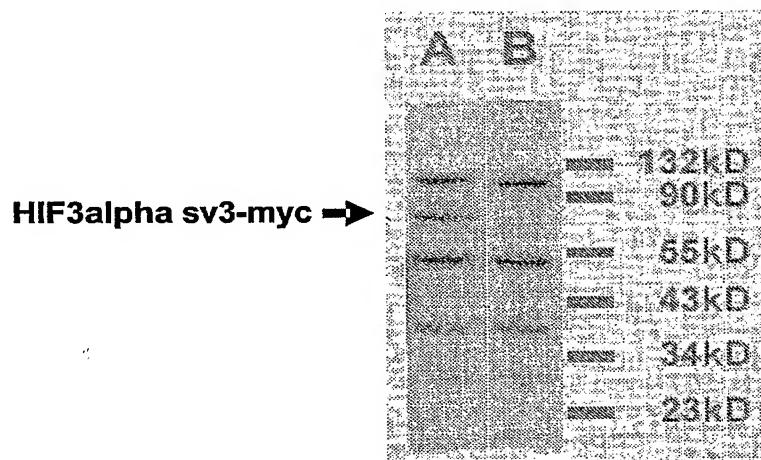


Fig. 34: Western Blot of H4APPsw cell protein extracts labeled with anti-HIF3alpha sv3-myc antibodies



**Fig. 35: Immunofluorescence analysis of
HIF3alpha sv3 protein in neuroglioma cells**

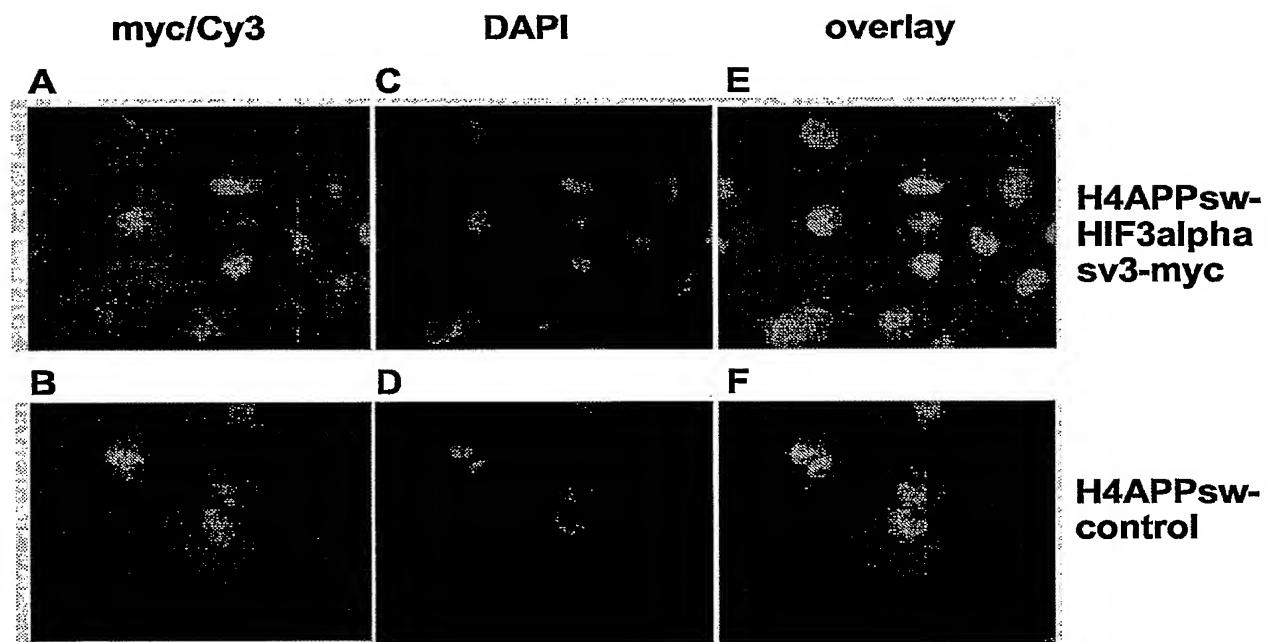


Fig. 36: Images of human brain sections labeled with anti-HIF3a antiserum, cell specific markers and DAPI

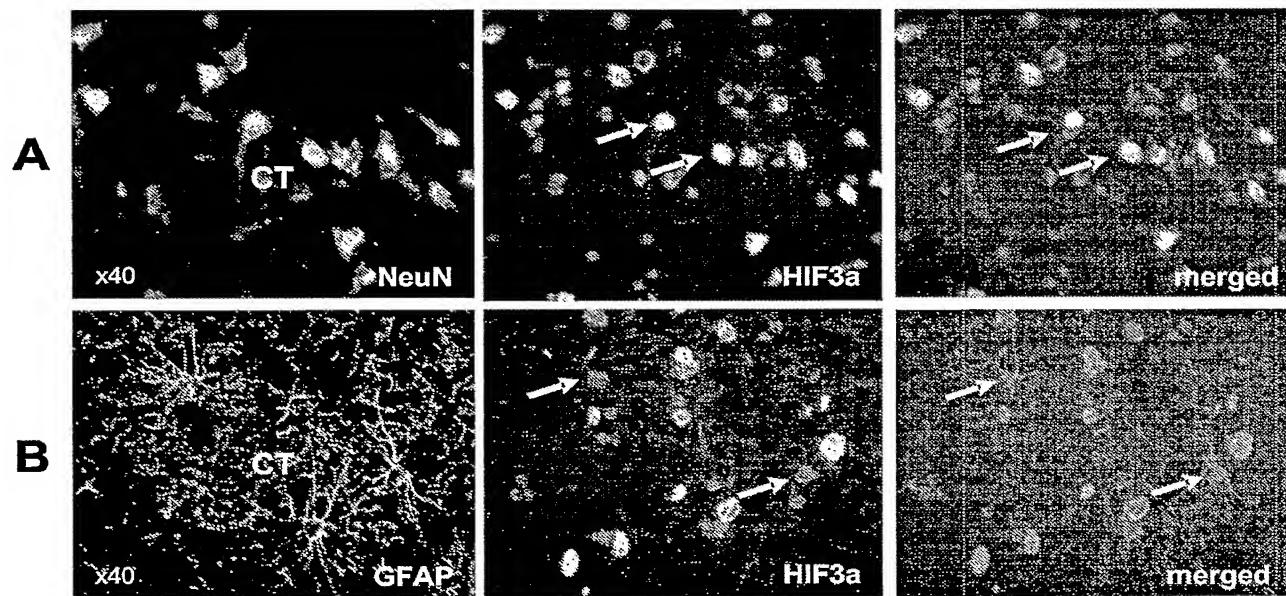


Fig. 37: Images of human brain sections labeled with anti-HIF3a antiserum, cell specific markers and DAPI

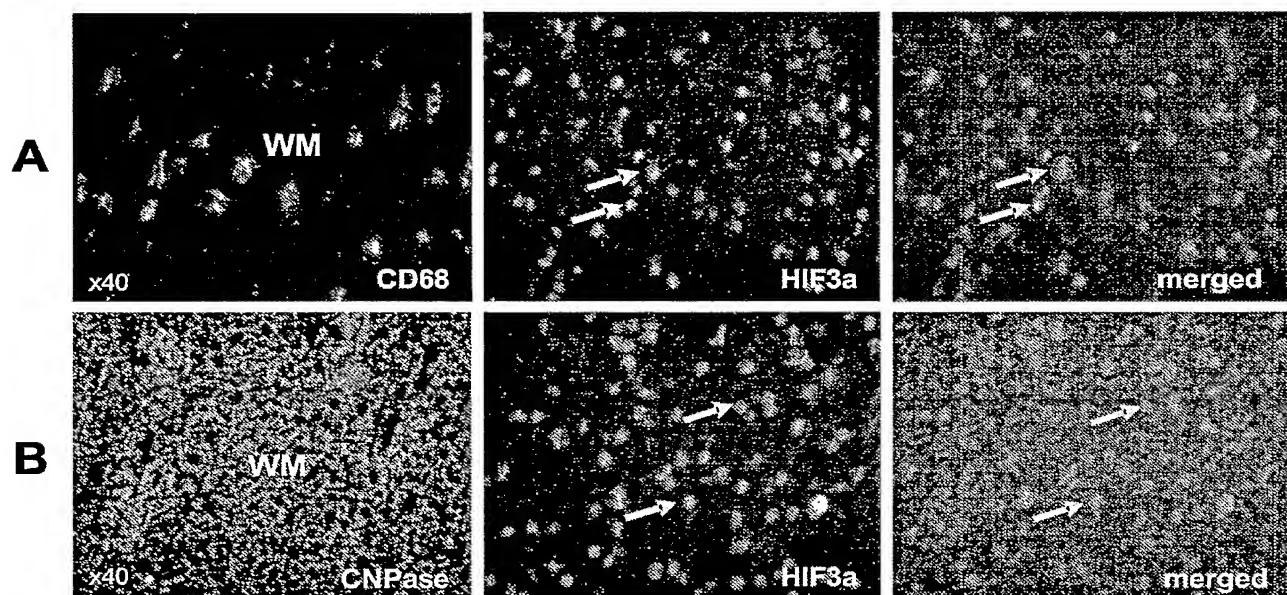


Fig. 38 : Images of human brain sections labeled with anti-HIF3a antiserum, GFAP and DAPI

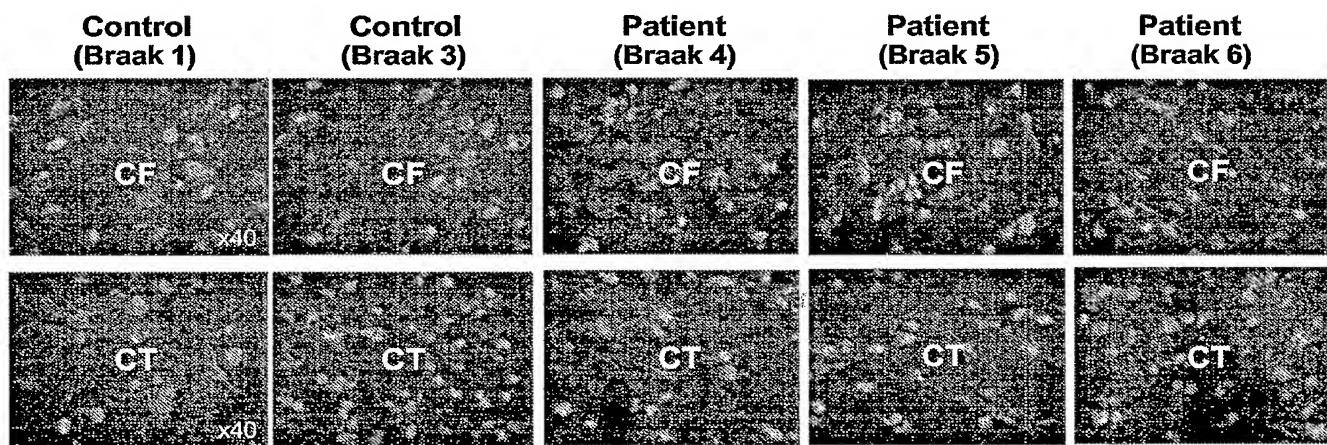


Fig. 39: Expression level of HIF3a sv3 expressing transgenic flies

name	cycle number	mean	stdev	error %	factor [normalization to rp49 cycle number]	mean*factor	difference	expression normalized to housekeeping gene and efficiency of HIF3a-sv3 primer	summary
HIF3a-sv3#3	30.03	30.237	0.2155	0.71265776	1	30.23666567			HIF3a-sv3#3 is 2.8 times higher expressed than HIF3a-sv3#4
HIF3a-sv3#3	30.22								
HIF3a-sv3#3	30.46								
HIF3a-sv3#4	30.96	31.160	0.1778	0.57048745	1.010625536	31.4910917	-1.25442502	-2.847544799	HIF3a-sv3#57 is 2.4 times higher expressed than HIF3a-sv3#3 and 5.3 times higher than HIF3a-sv3#4
HIF3a-sv3#4	31.22								
HIF3a-sv3#4	31.30								
HIF3a-sv3#57	27.84	27.953	0.1060	0.37915843	1.043347488	29.1650401	1.07162656	2.432692298	HIF3a-sv3#57 is 2.4 times higher expressed than HIF3a-sv3#3 and 5.3 times higher than HIF3a-sv3#4
HIF3a-sv3#57	27.97								
HIF3a-sv3#57	28.05						-2.32605158	-5.280137096	

E= $10^{(-1/slope)}$ slope= -2.806 E=2.27 HIF3a-sv3 primer pair

name	rp49 cycle #	mean	stdev	error %	factor
HIF3a-sv3#3	19.63	19.657	0.0929	0.47269323	1
HIF3a-sv3#3	19.76				
HIF3a-sv3#3	19.68				
HIF3a-sv3#4	19.59	19.450	0.1929	0.99163504	1.010625536
HIF3a-sv3#4	19.23				
HIF3a-sv3#4	19.63				
HIF3a-sv3#57	18.97	18.840	0.1300	0.69002123	1.043347488
HIF3a-sv3#57	18.71				
HIF3a-sv3#57	18.84				

Fig. 40: Nuclear localization of HIF3a sv3 in transgenic Drosophila

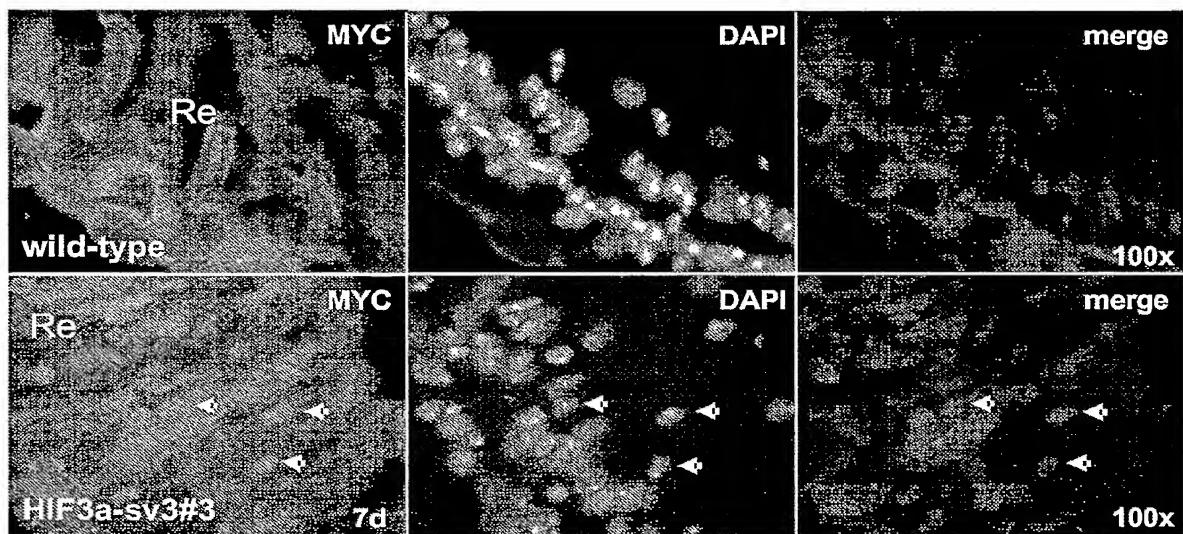


Fig. 41: HIF3a sv3 protein expression in transgenic flies

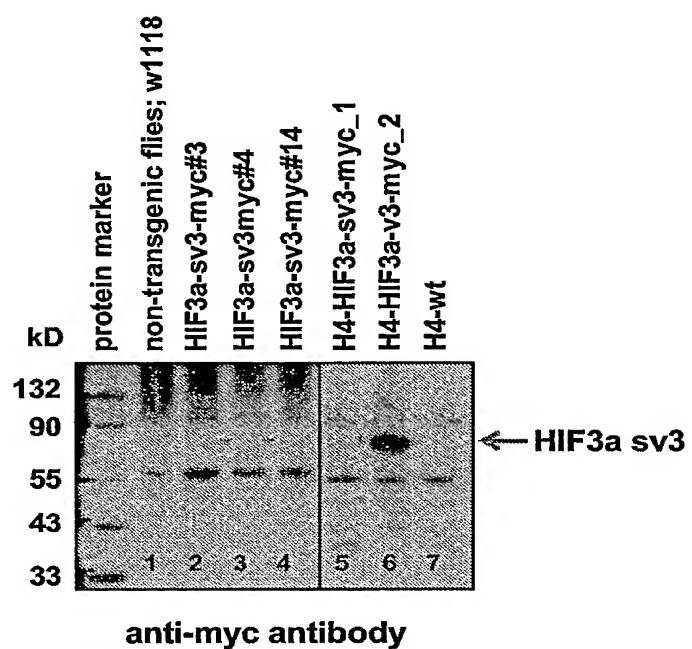


Fig. 42: HIF3a sv3 expression rescues photoreceptor cell degeneration

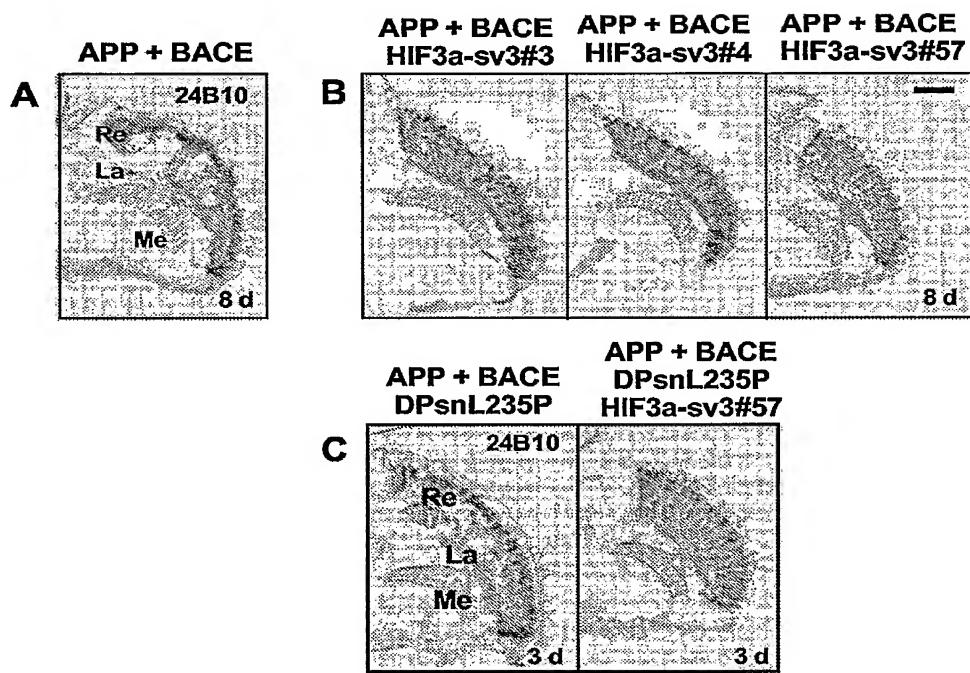


Fig. 43: Abeta level in hAPP/hBACE/HIF3a sv3 protein expressing flies

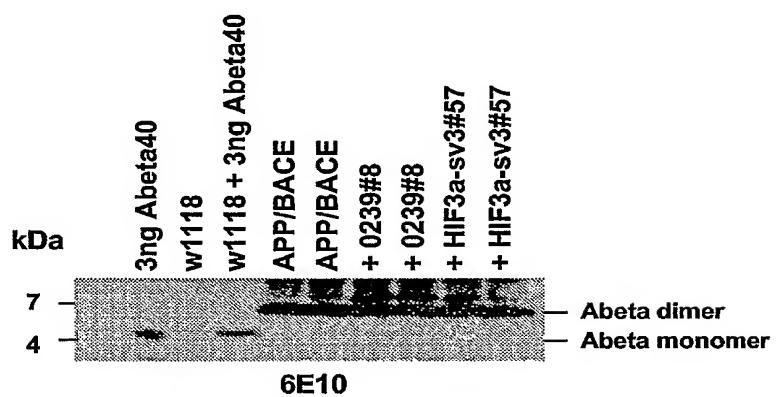


Fig. 44: Abeta plaque deposition in hAPP/hBACE/HIF3a sv3 expressing flies

